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ABSTRACT

Under the auspices of the School Mental Health Project in the Department of Psychology at the University of California, Los Angeles (UCLA), the Center for Mental Health in Schools approaches mental health and psychosocial concerns from the broad perspective of addressing barriers to learning and promoting healthy development. To accommodate the information needs of individuals and organizations requesting technical assistance, the Center has developed samples to provide immediate information on a variety of resources and how to access them. This sampler presents excerpts from publications and annotated bibliographies and abstracts of print and electronic resources, focusing on the use of technology to address barriers to learning, in the following sections: (1) Technology for Addressing Barriers to Learning; (2) Systems To Manage Systems and Information (including Accountability/Quality Assurance/Evaluation); (3) Technological/Multimedia Aids To Facilitate Intervention Activities; (4) Ongoing Learning: in Situ & Distance Learning; (5) Additional References to Books, Chapters, Articles, Reports (including electronically accessed formats); (6) Model Programs and Guides; and (7) Agencies, Organizations, & Internet Sites. Contains a glossary. (AEF)

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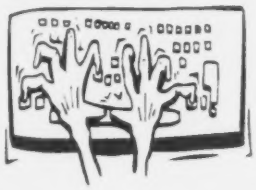
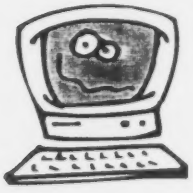
Center for Mental Health in Schools Training and Technical Assistance

Technical Assistance Sampler on:

Using Technology to Address Barriers to Learning





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Support comes in part from the Department of Health and Human Services, Public Health Service, Health Resources and Services Administration, Maternal and Child Health Bureau, Office of Adolescent Health.

U.S. Department of Health & Human Services
Public Health Service
HRSA
Health Resources & Services Administration
Maternal & Child Health Bureau
Office of Adolescent Health

UCLA CENTER FOR MENTAL HEALTH IN SCHOOLS

Under the auspices of the School Mental Health Project in the Department of Psychology at UCLA, our center approaches mental health and psychosocial concerns from the broad perspective of addressing barriers to learning and promoting healthy development. Specific attention is given policies and strategies that can counter fragmentation and enhance collaboration between school and community programs.

MISSION: *To improve outcomes for young people by enhancing policies, programs, and practices relevant to mental health in schools.*

Through collaboration, the center will

- **enhance practitioner roles, functions and competence**
- **interface with systemic reform movements to strengthen mental health in schools**
- **assist localities in building and maintaining their own infrastructure for training, support, and continuing education that fosters integration of mental health in schools**

Consultation Cadre *Clearinghouse*

Newsletter *National & Regional Meetings*

Electronic Networking

Guidebooks *Policy Analyses*

Co-directors: Howard Adelman and Linda Taylor
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*In 1996, two national training and technical assistance centers focused on mental health in schools were established with partial support from the U.S. Department of Health and Human Services, Public Health Service, Health Resources and Services Administration, Maternal and Child Health Bureau, Office of Adolescent Health. As indicated, one center is located at UCLA; the other is at the University of Maryland at Baltimore and can be contacted toll free at 1-(888) 706-0980.

What is the Center's Clearinghouse?

The scope of the Center's Clearinghouse reflects the School Mental Health Project's mission -- to enhance the ability of schools and their surrounding communities to address mental health and psychosocial barriers to student learning and promote healthy development. Those of you working so hard to address these concerns need ready access to resource materials. The Center's Clearinghouse is your link to specialized resources, materials, and information. The staff supplements, compiles, and disseminates resources on topics fundamental to our mission. As we identify what is available across the country, we are building systems to connect you with a wide variety of resources. Whether your focus is on an individual, a family, a classroom, a school, or a school system, we intend to be of service to you. Our evolving catalogue is available on request; eventually it will be accessible electronically over the Internet.

What kinds of resources, materials, and information are available?

We can provide or direct you to a variety of resources, materials, and information that we have categorized under three areas of concern:

- Specific psychosocial problems
- Programs and processes
- System and policy concerns

Among the various ways we package resources are our *Introductory Packets, Resource Aid Packets, special reports, guidebooks*, and *continuing education units.* These encompass overview discussions of major topics, descriptions of model programs, references to publications, access information to other relevant centers, organizations, advocacy groups, and Internet links, and specific tools that can guide and assist with training activity and student/family interventions (such as outlines, checklists, instruments, and other resources that can be copied and used as information handouts and aids for practice).

Accessing the Clearinghouse

- E-mail us at **smhp@ucla.edu**
- FAX us at (310) 206-8716
- Phone (310) 825-3634
- Write School Mental Health Project/Center for Mental Health in Schools, Dept. of Psychology, Los Angeles, CA 90095-1563

Check out recent additions to the Clearinghouse on our Web site
http://smhp.psych.ucla.edu

All materials from the Center's Clearinghouse are available for a minimal fee to cover the cost of copying, handling, and postage. Eventually, we plan to have some of this material and other Clearinghouse documents available, at no-cost, on-line for those with Internet access.

If you know of something we should have in the clearinghouse, let us know.

TECHNICAL ASSISTANCE SAMPLER

We realize that each individual and organization requesting technical assistance has unique and special information needs. To accommodate this diversity, we are developing samplers to provide immediate information on a variety of resources and how to access them.

In compiling samplers, we conduct a search of agencies, organizations, the Internet, relevant programs, and library resources. Then, we select a sample of diverse resources -- including resources that are themselves links to other resources and information. We also provide information on how to access other knowledgeable individuals who are ready to offer assistance. All resources listed are relatively easy to access through libraries, by phone, or over the Internet. If you are not yet connected to the Internet, hopefully you have access through work, a local library, or a friend.

We hope the attached sampler is sufficient to meet your needs. However, should you require further help, please let us know. And should you know of something you think we should add, let us know this as well.

The Center is co-directed by Howard Adelman and Linda Taylor and operates under the auspices of the School Mental Health Project, Dept. of Psychology, UCLA.

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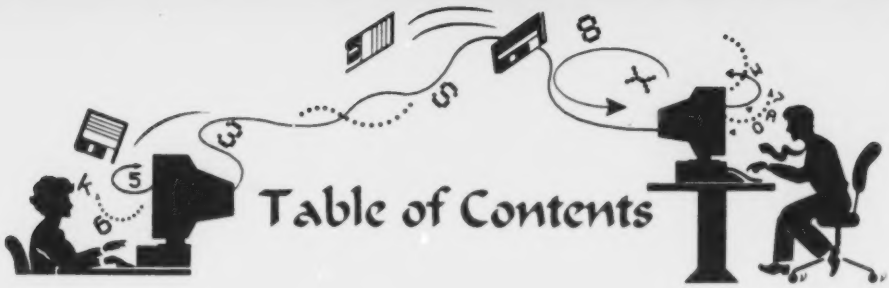

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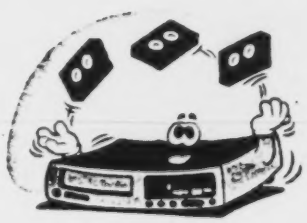
I. Technology for Addressing Barriers to Learning

A. Overview - A Big Picture

B. The Benefits of Adding Technology to Our Range of Approaches

1. Technology & Mental Health

2. Technology & Education



C. Caveats and Cautions

1. Technology for Addressing Barriers to Learning

A. Overview - A Big Picture

Advanced technology offers tools for improving almost every facet of efforts to address barriers to learning and promote healthy development.

Most of us already are familiar with the many ways the personal computer has increased access to the "information highway," as well as its contributions as an instructional tool. But these are only the tip of the iceberg. Besides a multitude of other internet applications and computer assisted interventions, there is growing use of telecommunications to provide distance learning and consultation and health information and care across distances (telehealth). And DVD technology is expanding, exponentially, the possibilities for enhancing these and other activities.

On another front, the growing need for data in planning, implementing, and evaluating interventions is speeding up development of integrated information management systems.

The attached matrix highlights a range of intervention activity that can benefit from advanced technological applications and some of the categories of tools that are available.

Clearly, a brave new world has emerged. There is much for all of us to learn about advanced technological applications. We all need to grasp the big picture and develop a plan and an agenda for integrating such applications into our daily work. This sampler provides a beginning point.

Advanced Technology: Tools and Forms of Intervention

		TOOLS				
FORMS OF INTERVENTION		*Personal Computers*	*TV/ DVD*	*Multimedia*	*Systems for Integrated, Computerized Information Management*	*Specialized Technologies for those with Disabilities*
	Information & Resource Access					
	Self-help					
	Support Groups, Networking, Conferencing					
	Assessment					
	Referral/ Triage/ Care Monitoring					
	Planning/ Implementation (instruction, enrichment, remediation, care, counseling, and treatment)					
	Accountability/ Quality Assurance/ Evaluation					
	Professional Education (including distance learning, supervision, and consultation)					

excerpt from...

YEAR 2005: Using Technology to Build Communities of Understanding

A Report to the U.S. Congressional Office of Technology Assessment
Prepared by: Center for Technology in Learning
*SRI International**

...But in our vision for the year 2005, digital technologies are used to create a web of relationships, engagement, and participation that transforms the educational enterprise and makes it the center of community life. Today, schools, homes, and workplaces function separately -- connected by geography and circumstances but infrequently by common purpose and collaborative action. But in our vision of communities of understanding, digital technologies are used to interweave schools, homes, workplaces, libraries, museums, and social services to reintegrate education into the fabric of the community. Learning is no longer encapsulated by time, place, and age but has become a pervasive activity and attitude that continues throughout life and is supported by all segments of society. Teaching is no longer defined as the transfer of information, learning no longer as the retention of facts. Rather, teachers challenge students to achieve deeper levels of understanding and guide students in the collaborative construction and application of knowledge in the context of authentic situations and tasks. Education is no longer the exclusive responsibility of teachers but benefits from the participation and collaboration of parents, business people, scientists, seniors, and, of course, students of all ages.

How can technology support this transformation? First of all, the emerging information superhighway will connect schools with each other and with businesses, libraries, museums, and community resources. The connections between schools and homes will help students to extend their academic day, allow teachers to draw on significant experiences from students' everyday lives, and allows parents to become more involved in the education of their children and to have extended educational opportunities of their own. Connections between school and work will allow students to learn in the context of real-life problems, allow teachers to draw on the resources of technical and business experts, and allow employers to contribute to and benefit from the fruits of an effective educational system. Connections between schools, homes, and the rest of the community will enable students to relate what is happening in the world outside to what is happening in school, will allow teachers to coordinate formal education with informal learning, and will allow the community to reintegrate education into its daily life.

To make these connections pay off, this infrastructure will be filled with effective and engaging materials and tools that challenge students, afford new activities, and motivate learning. When users access the superhighway, they will find rich, multimedia resources in mathematics, sciences, and humanities and rich contexts of authentic situations and tasks. They will have access to tools that allow them to communicate and collaborate with others, consider ideas from multiple perspectives, express their ideas in multiple ways, build models, and explore simulations....

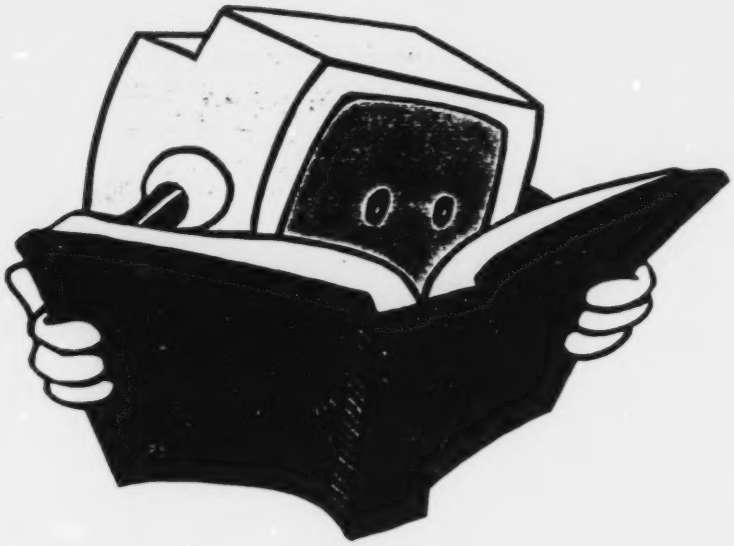
*SRI international, 333 Ravenswood Ave. Menlo Park, CA 94025-3493 Ph: 415/326-6200

I. Technology for Addressing Barriers to Learning

B. The Benefits of Adding Technology to Our Range of Approaches to Address Barriers to Learning

1. Technology & Mental Health

2. Technology & Education



1. TECHNOLOGY AND MENTAL HEALTH

Alternative Approaches to Mental Health Care

Excerpt from KEN Publications/Catalog *(A Service of CMHS)*•

...Technology-Based Applications

The boom in electronic tools at home and in the office makes access to mental health information just a telephone call or a "mouse click" away. Technology is also making treatment more widely available in once-isolated areas.

Telemedicine: Plugging into video and computer technology is a relatively new innovation in health care. It allows both consumers and providers in remote or rural areas to gain access to mental health or specialty expertise. Telemedicine can enable consulting providers to speak to and observe patients directly. It also can be used in education and training programs for generalist clinicians.

Telephone Counseling: Active listening skills are a hallmark of telephone counselors. They also provide information and referral to interested callers. Telephone counseling often is a first step for many people to receiving in-depth mental health care. Research shows that such counseling from specially trained mental health providers reaches many people who otherwise might not get the help they need...

Electronic communications: Technologies—such as the Internet, World Wide Web, bulletin boards, and electronic mail lists—provide access to a wide range of information directly to consumers and the public. Online consumer groups can exchange information, experiences, and views on mental health, treatment systems, alternative medicine, and other related topics.

Radio psychiatry: Another relative new-comer to therapy, it was first introduced in the United States in 1976. Radio psychiatrists and psychologists provide advice, information, and referrals to callers with a variety of mental health questions. The American Psychiatric and American Psychological Associations have issued ethical guidelines for the role of psychiatrists and psychologists with radio shows.

• The Center for Mental Health Services (CMHS), Knowledge Exchange Network (KEN), Substance Abuse and Menta. Health Services Administration (SAMHSA)

This material was downloaded from:
http://www.mentalhealth.org/publications//allpubs/ken98-0044/ken980044.htm

PSYCHOLOGICAL APPLICATIONS ON THE INTERNET

From: Psychological applications on the Internet: A discipline on the threshold of a new millennium by A. Barak in *Applied & Preventive Psychology, 8,* 231-245.

The rapid developments in computers and information technology over the past decade has had an impact on psychology, which has moved in this context from local computer applications to network applications to take advantage of the Internet.

In a critical review of various psychological applications in use on the Internet (with special emphasis on their promises and advantages as well as to their shortcomings and problems), Barak covers 10 types of psychological internet applications:

- information resources on psychological concepts and issues;
- self-help-guides;
- psychological testing and assessment;
- help in deciding to undergo therapy;
- information about specific psychological services;
- single-session psychological advice through e-mail or e-bulletin boards;
- ongoing personal counseling and therapy through e-mail;
- real-time counseling through chat, web telephony, and videoconferencing;
- synchronous and asynchronous support groups, discussion groups, and group counseling;
- psychological and social research.

INFORMATION SYSTEMS AND MENTAL HEALTH SERVICES

Excerpted from: P. Binner (1993). "Information Systems and Mental Health Services: Issues for the 90's" *Technology in People Services*, 55-56.

[There are] six pieces of unfinished business that system designers will need to attend to if mental health information systems are to achieve their maximum effectiveness. First, information system design and service system design play complementary roles. Second, an effective results oriented information system requires both a results oriented direct service system and a results oriented language for describing its activities. Third, issues of management power, control, and empowerment will become increasingly important as information systems improve. How these issues are resolved will have a major impact on the success of information system installations. Fourth, the success of knowledge based power will depend on the appropriateness of the conceptual model employed. The prediction oriented deterministic model of science will need to be supplemented with the goal related monitoring model in the design of information systems. Fifth, accounting systems are a very limited but powerful part of any organization's information system. It is essential that the information system's design provide for a linkage to results across programs and time sufficient to allow the relevant program information to be developed. And, finally, to safeguard the integrity of the information system, a system of information checks and balances needs to be developed.

Assuming that technology will continue to advance at a rapid pace, the potential power of information systems will also continue to grow. If information system designers can deal successfully with some of these issues of context and content, the functional effectiveness of information systems could improve even faster than their technology. However, this analysis poses a very large challenge, it asks information system designers to take on roles that go far beyond the domain of information system technology. These are roles that address the problems that produce some of the major limitations to the effectiveness and productivity of information systems. If the system development environment permits, meeting the challenge of these roles will keep system designers constructively engaged for at least the next decade.

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2. TECHNOLOGY AND EDUCATION

Excerpted from: K. M. Culp, J. Hawkins, & M. Honey (1999). Review Paper on Educational Technology Research and Development. *Center for Children and Technology Reports*.
Available at: http://www2.edc.org/CCT/cctweb/public/include/pdf/01_1999.pdf

Researchers, developers, and practitioners have been seeking to define the best roles and functions for electronic technologies in educational settings since computers first began appearing in schools, in the mid-1960s (Cuban, 1986). This interest has accelerated since microcomputers became available in the late 1970s. Early studies emphasized the distribution and emerging uses of the then-new tools in schools, as well as learning outcomes of individual students working directly with machines (Papert, 1980). At that time, there was relatively little learning-appropriate software—innovative or otherwise, in school or laboratory—to be studied. The studies did, however, establish a body of evidence suggesting that technology could have a positive impact on several dimensions of students' educational experiences, and researchers began to identify some of the important mediating factors affecting the student-computer interaction. For example, meta-analyses of student learning studies suggested that computer-based instructional materials have a positive effect on student performance (Kulik & Kulik, 1991). At the same time, other studies demonstrated that the nature of the impact of the technology on students was greatly influenced by the specific student population being studied, the design of the software, the teacher's practices, student grouping, and the nature of students' access to the technology (Software Publishers' Association, 1996). A number of comprehensive reviews and syntheses of the research conducted during this period are available (Kulik & Kulik, 1991; Software Publishers' Association, 1997; U.S. Department of Education, 1996).

In one study, the teachers and administrators indicated the following reasons for bringing technology into their schools:

- Support thinking processes
- Stimulate motivation and self esteem
- Promote equity
- Prepare students for the future
- Support changes in school structure
- Explore technology capabilities

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U.S. Department of Education (1996). *Getting America's students ready for the 21st century: Meeting the technology literacy challenge. A report to the nation on technology and education*. Washington, DC: United States Department of Education.

2. *TECHNOLOGY AND EDUCATION* (cont.)

Schools And Advanced Technology

...Educators have used computers and other information technologies as tools to increase student learning in America's elementary and secondary schools for over 30 years. The 1960s brought computer-assisted instruction (CAI) to schools. CAI was developed to help students acquire basic skills, practice them, and measure learning gains.

With the development and increased availability of lower-cost personal computers, the use of technology in schools broadened in the early 1980s to encompass the use of general-purpose tools such as word processors and spreadsheets. Technology that allowed classes to be given by remote teachers via two-way audio and video, known as "distance learning," also first appeared in schools in the early 1980s and has become wide-spread. Distance learning programming, transmitted via cables, fiber optics, and satellites, expands access to instruction for students, particularly for those in remote regions of the nation and in underserved communities.

As we approach the 21st century, several new, more powerful technologies are just beginning to make their way into classrooms across the nation. For example, new personal computers support "multimedia" educational software that employs both sound and video to teach students facts and concepts. Advances in telecommunications technologies have spurred access to the Internet, allowing students and teachers to communicate with people from around the world via electronic mail, or "e-mail" as it is commonly known. New ways of obtaining and presenting information have given students powerful new ways of analyzing and understanding the world around them....

Excerpted from: Riley, R. W., Kunin, M. M., Smith, M. S., and Roberts, L. G. (1996). "Getting America's Students Ready for the 21st Century: Meeting the Technology Literacy Challenge. A Report to the Nation on Technology and Education." United States Department of Education.

The Benefits of Information Technology

Excerpt from: Eric Digest*

More than three decades ago, computers and related information technologies were introduced to educators as educational tools. Today, there are computers of various descriptions in nearly all schools in the United States. Teachers, school administrators, government officials, and others faced with the costs involved in technology implementation must constantly evaluate the educational benefits of technology. Is there research or other evidence that indicates computers and advanced telecommunications are worthwhile investments for educators? This Digest summarizes the observed benefits of technology implementation. The importance of evaluating the effects of technology on learning is also addressed.

APPLICATIONS OF TECHNOLOGY TO BASIC SKILLS

Using educational technology for drill and practice of basic skills can be highly effective according to a large body of data and a long history of use (Kulik, 1994). Students usually learn more, and learn more rapidly, in courses that use computer assisted instruction (CAI). This has been shown to be the case across all subject areas, from preschool to higher education, and in both regular and special education classes. Drill and practice is the most common application of CAI in elementary education, the military, and in adult educational settings...

APPLICATIONS OF TECHNOLOGY TO ADVANCED SKILLS

The application of educational technologies to instruction has progressed beyond the use of basic drill and practice software, and now includes the use of complex multimedia products and advanced networking technologies. Today, students use multimedia to learn interactively and work on class projects. They use the Internet to do research, engage in projects, and to communicate. The new technologies allow students to have more control over their own learning, to think analytically and critically, and to work collaboratively...

SUPPORT FROM THE COMMUNITY.

Parents, businesses, and community members can use technology as a springboard to become more involved in the activities of neighborhood schools. All can help with wiring or technical support. Parents can use e-mail to facilitate communication with teachers and administrators. Businesses can use e-mail to help mentor students and help them prepare for the workplace.

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Fletcher, J.D., Hawley, D.E., & Piele, P.K. (1990). Costs, effects, and utility of microcomputer assisted instruction in the classroom. "American Educational Research Journal," 27, 783-806.

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*ED420302 98 The Benefits of Information Technology. ERIC Digest. Author: Kosakowski, John
http://www.ed.gov/databases/ERIC_Digests/ed420302.html

2. TECHNOLOGY AND EDUCATION (cont.)

Television as Teacher

Excerpted from:
Learning from television: A review of the research*

Traditionally, educators have perceived television as not particularly beneficial to literacy development. Concerns were fueled by findings suggesting that with the introduction of television people spend less time reading books and reading scores decline (e.g., Corteen, 1986; Robinson, 1972; Werner, 1971). However, as our society is striving to make adjustments to the decline in literacy skills and new ways of learning and teaching are being explored, educators are becoming interested in exploring the educational potential of television and video for teaching basic literary skills such as reading, writing, and math.

> The interest in television as an educational medium has increased for several reasons. First, existing educational television programs that were developed to enhance the literacy development of both children (e.g., *The Electric Company, Sesame Street, Ghostwriter*) and adults (e.g., television-supported distance learning programs from the Open University in Great Britain, second language programs produced by TV Ontario) have been quite successful in achieving their intended outcomes (e.g., Bates, 1983; Bryant, Alexander, & Brown, 1983; Soudack, 1990). Second, because television is a very accessible medium, it has the potential to reach learners that have not been able to participate in traditional adult literacy programs. Television is accessible both in terms of its technology and in terms of its content. By 1985, 99% of all US households had at least one television set (Nielson Reports, 1986). Moreover, viewers are intimately familiar with the content of television and tend to associate it with pleasurable experience because of its power to entertain (Bates, 1983). Finally, the development of new visual technologies, (e.g., video recording and playback, CD-ROM and videodisk technology, multimedia computer technology) makes it possible to provide users with more control and interactivity and thus to adapt televised instruction to the needs of a variety of learners and learning styles…

The research literature suggests that the content of television can have four broad types of effects on people. They include behavior, attitudes, beliefs and values, knowledge, and cognitive skills.

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Soudack, A. (1990). Televised second-language courses for adults: A review of relevant research. Toronto, ON: TV Ontario Evaluation and Project Research Report No. 8-1990-91.

Werner, A. (1971). Children and television in Norway. Gazette, 16(3), 133-151.

***Report available at http://www2.edc.org/CCT/cctweb/public/include/pdf/10_1996b.pdf**

2. TECHNOLOGY AND EDUCATION (cont.)

Dallas Independent School District's Technology Strategic Plans*

The Texas State Board of Education approved a new curricular area entitled Technology Applications within the Texas Essential Knowledge and Skills (TEKS) which was implemented September 1, 1998. Beginning with the class of 2001, every student must take a year-long course in Technology Applications as a prerequisite to high school graduation.

The integration of appropriate technology within all levels of our educational system is a primary goal for DISD. This plan was developed to provide a road map to support the DISD Vision. Instructional technology and services must receive the greatest attention in the future if the vision and strategic goals for DISD are to be met. Above all, this plan must ensure equitable access by all students to both the technology and the learning resources that it provides.

- The Vision of the Dallas Independent School District Technology Services is to support, facilitate and enhance the use of technology in the educational environment.
- The Mission of the Dallas Independent School District Technology Services is to develop and implement the comprehensive strategies which will support, facilitate and enhance the use of technology in every aspect of the educational environment, so as to enable DISD access to global information resources, communication tools, and in realizing the creative potential which can be provided by technology today and in the future.
- The Strategic Plan for Technology provides the long-range framework for achieving the Technology Mission.
- The Technology Implementation Plan defines the needs of individual areas to activate the Strategic Plan....

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The Technology Vision

Any One. Instruction must be available to every student; assistance to every teacher; and information to every administrator without the need for special texts, equipment, or materials. Everything should be available online via computer and communications technology. This will require leading edge computers, advanced video devices, and communications links. This environment will be a school where every educator and every student can get hands-on training and access when or where needed. This environment will be a school where professional colleagues have access to financial data and student performance as well as the analytical tools to effectively use that information.

Any Place. Instruction must be available to every student in any place that has a network hookup or communications access. Every student should have the opportunity to become immersed in the sights, sounds, and languages of other countries, visit museums, explore the inner workings of a cell, or explore outer space from a virtual space suit.

(cont.)

*Available at: http://www.dallas.isd.tenet.edu/depts/technology/plan/strategic_plan_part4.htm

(Dallas, cont.)

Any Time. Instruction must be available to everyone any time of the day or night, any day of the week, any week of the year. Open entry, open exit; anytime and all the time. Our vision is to free students from the limitations of traditional education. We will increase their capabilities to learn and to take the courses they need when and where they need them for the rest of their lives. This technology vision and its implications are in direct support of the DISD Board Goals and will truly allow our graduates to become global citizens. Education will continue its transformation by the following:

- Curriculum organized as projects involving sustained and complex co-investigations;
- Accelerated curriculum available to everyone;
- Many secondary classes taught via distance education;
- Media center resources distributed via network anywhere;
- Student access to worldwide connectivity available anywhere, any time, for resources and interaction;
- Searchable textbooks and other media resources available online;
- Students access any time, anywhere, to class assignments and homework;
- Specific video and audio conferences set up in advance for cooperative projects and debriefings;
- Portable, interconnected, wireless computers with access to multimedia communications for all students and teachers;
- Timely and convenient professional development with access to experts through video-conferencing on portable computers;
- No geographical boundaries for some classes. Students and instructional resources may be accessed all around the world;
- Student scheduling online for a variety of classes on a variety of schedules;
- Help Desk support for all software with dispatch ability to support and schedule every need, from software training and support to installation and ordering field services; and
- Complete and current financial data readily available to guide educators through the development of multiyear budget projections.

Multiple Technology Requirements

DISD represents a unique environment in the application of technology. The District requires technology to support its business activities much like any large company, except that there are over 9,000 local offices (i.e. classrooms). In addition, technology in DISD must serve as both a conduit for curriculum delivery and a part of the curriculum to be delivered. For efficient and economical deployment, technology planning and implementation must be integrated across all of these needs. To meet these unique requirements, technology development must be considered in the following three areas:

Instructional applications of technology directly support the teaching and learning environment as well as the interaction between students and resources (e.g. libraries, online services guidance services). Development must focus on

- Enhancing the teaching and learning environment.
- Retraining educators and retooling curriculum delivery.

Administrative applications of technology manage material resources, including personnel and financial applications. Development must focus on

- Improving the management of schools.
- Ensuring that all administrators possess the capacity to use technology.

(cont.)

(Dallas, cont.)

District-wide database applications of technology provide secured, timely, accurate information in a standard format to all who need it. Development must focus on

- Providing all educators with cost-effective access to relevant and high-quality information by consolidating all student, personnel and financial records, the library system, and longitudinal studies...

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...The integration of appropriate technology within all levels of our educational system is a primary goal for DISD. This plan was developed to provide a road map to support the DISD Vision. Instructional technology and services must receive the greatest attention in the future if the vision and strategic goals for DISD are to be met. Above all, this plan must ensure equitable access by all students to both the technology and the learning resources that it provides.

The Strategic Plan for Technology provides the long-range framework for achieving the Technology Mission.

The Technology Implementation Plan defines the needs of individual areas to activate the Strategic Plan....

- Introduction
- The DISD Board of Education Goals
- The Technology Vision
- Multiple Technology Requirements
- Recommendations
- Benefits
- Technology Infrastructure
- Infrastructure Principles and Design Objectives

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I. Technology for Addressing Barriers to Learning (Cont.)

C. Caveats and Cautions

Social and Psychological Impact of the Internet

Excerpted from: Internet Paradox

The Internet could change the lives of average citizens as much as did the telephone in the early part of the 20th century and television in the 1950s and 1960s. Researchers and social critics are debating whether the Internet is improving or harming participation in community life and social relationships. This research examined the social and psychological impact of the Internet on 169 people in 73 households during their first 1 to 2 years on-line. We used longitudinal data to examine the effects of the Internet on social involvement and psychological well-being. In this sample, the Internet was used extensively for communication. Nonetheless, greater use of the Internet was associated with declines in participants' communication with family members in the household, declines in the size of their social circle, and increases in their depression and loneliness. These findings have implications for research, for public policy, and for the design of technology.

Reference:

Kiesler, Sara, Kraut, Robert, Lundmark, Vicki, Mukopadhyay, Patterson, Michael, & Scherlis, William. (1998) Internet paradox: A social technology that reduces social involvement and psychological well-being?. *American Psychologist*

Available at: http://www.apa.org/journals/amp/amp5391017.html

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C. Caveats, Cautions (cont.)

"...Ninety-nine percent of American public schools have computers, and 93 percent of students use them during the school year. But these numbers can be deceiving. Many of the computers in schools are older, cannot be networked, and cannot run the newest software. Furthermore, many of these computers are not being used in ways that exploit their full capabilities. Instead, they are being used to reinforce outdated models of education that fall far short of the goal of providing students with what they need in today's world. For networks to be used effectively in schools, a new model of education is needed. This new model goes to the heart of the educational enterprise, reshaping the roles of teachers, students, and technology."

Excerpted from: *http://www.nap.edu/readingroom/books/techgap/welcome.html. "Reinventing Schools: The Technology is Now!" National Academy of Sciences and National Academy of Engineering.*

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"There is no good evidence that uses of computers significantly improve teaching and learning, yet school districts are cutting programs--music, art, physical education-that enrich children's live's to make room for this dubious nostrum..."

Todd Oppenheimer (Atlantic Monthly, July, 1997)

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Technology is a tool, not a solution to problems.
And, it brings with it iatrogenic effects.

Most "hardware" is only as good as its "software."

Technology content and processes both convey values.

No machine can take the place of the village in raising a child.

II. Systems to Manage Systems and Information
(including Accountability / Quality Assurance / Evaluation)

A. Systems to connect services and agencies

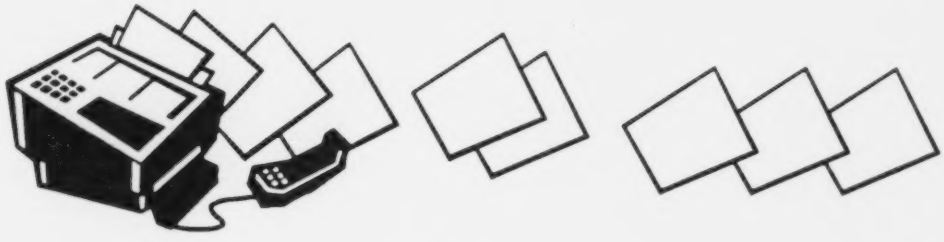
B. School-wide Systems

1. *Central Administrative System*
   (e.g. accounting, finance, payroll)

2. *Student Services*
   (e.g. Student records, bus schedules, food service, etc.)

3. *Infrastructure*
   (e.g. heating, security, telecommunications, building, etc.)

C. Classroom Level Systems



II. Systems to Manage Systems and Information

(including Accountability / Quality Assurance / Evaluation)

Computers are revolutionizing the way schools and agencies conduct business. They provide systems for planning, systems for managing the daily work of the organization, information management systems, and systems to aid organizations in working together. In doing so, they facilitate accountability, provide key mechanisms to aid in efforts to enhance quality and provide data on accomplishments.

II. Systems to Manage Systems and Information
(including Accountability / Quality Assurance / Evaluation)

A. Systems to Connect Services and Agencies

Information Systems to Support Comprehensive Integrated Service Delivery and Sustainability (1995)
by W.R. McDonald

This report is one in a series of reports to assist local interagency service collaboration and management information systems software developers. Topics include: technology, technology integration, and policy.

Contact: Foundation Consortium for School-linked Services ph: 916-646-3646

Technology @ Your Fingertips: A Guide to Implementing Technology Solutions for Education Agencies and Institutions

This handbook describes the steps necessary to identify, acquire, and implement technology solutions for organizations. It can be ordered or downloaded in PDF form from http://nces.ed.gov/pubs98/tech/index2.htm

Contact: Gerald Malitz (202)219-1364, National Center for Education Statistics Office of Educational Research and Improvement, U.S. Department of Education 555 New Jersey Ave, NW, Washington, DC 20208-5574

Information Systems to Support Comprehensive Human Services Delivery: Emerging Approaches, Issues, and Opportunities (1994)
by C. Marzke, D. Both, & J. Focht

This report involves a nationwide study of the current status of information technology in the context of comprehensive services delivery. The study focuses on information systems initiatives developed to support efforts to reform the service delivery system, rather than on those efforts that relate to the automation of existing single service programs. The results of the study reveal that efforts to apply information technology to meet the needs of comprehensive services delivery are relatively scarce, and most projects are still in the early stages of development.

National Center for Service Integration, c/o Child and Family Policy Center 218 Sixth Ave., Fleming Building, Suite 1021, Des Moines, IA 50309-4006 Phone: (515) 280-9027, Fax: (515) 244-8997.

NY Public Interest Research Group Community Mapping Assistance Project

The Community Mapping Assistance Project (CMAP) was established to enable non-profit organizations throughout New York State access the power of computer maps, or geographic information systems (GIS), without being burdened with GISs prohibitive cost. Computer mapping is a powerful tool for analysis and advocacy. The money, time and effort to obtain, understand, and use a GIS can be a major obstacle for most non-profits. That's why CMAP was established. Our service consults with a group about the geographic analysis it needs, maps the organization's data, and provides computer generated results in the form of maps, graphs, and reports. CMAP's fees are nominal, in order to cover our costs and be affordable to other non-profits.

See: http://www.cmap.nypirg.org/

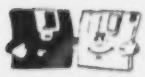
II. Systems to Manage Systems and Information
(including Accountability / Quality Assurance / Evaluation) [cont.]

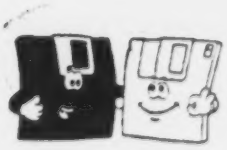
B. School - Wide Systems

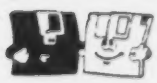
1. Central Administrative System
   (e.g. accounting, finance, payroll)

2. Student Services
   (e.g. Student records, bus schedules, food service, etc.)

3. Infrastructure
   (e.g. heating, security, telecommunications, building, etc.)







II. Systems to Manage Systems and Information
(including Accountability / Quality Assurance / Evaluation) [cont.]
B. School - Wide Systems

1. Central Administrative System (e.g. accounting, finance, payroll)

Accu Vision Systems: Supervisory and Managerial System
by Psychological Corporation, San Antonio, TX

Accu Vision Systems are job-related evaluation systems that combine video, computers, and simulations. The system uses video vignettes to depict typical situations that are likely to occur in a given job. This can be used for personnel selection or for diagnosing staff developmental and training needs. The computer generated feedback can be used as an aid in personnel selection by providing a probability of success statement as well as information on applicants' performance in the skills measured by the system.

Psychological Corporation; 555 Academic Court, San Antonio, TX 78204-2498.

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From Council of the Great City Schools Website
Best practices: *Human Resources & Personnel Management*

Affirmative Action -- **http://ftp.milwaukee.k12.wi.us/departments/affact/aamissn.htm**
An on-line service developed by the Milwaukee Public Schools that sets out objectives and policies.

Budget and Position Management -- **http://spidey.sfusd.k12.ca.us/programs/budget/budmain.html**
Developed by the Business and Administrative Services Division of the San Francisco Unified School District to oversee the development, monitoring, and forecasting of revenues and expenditures for the District including the analysis and forecasting of revenue from the Federal, State, and Local sources and the monitoring and forecasting of staffing and expenditures.

Human Resources Information System Project--**Http://www.mcps.k12.md.us/departments/adi/hris.htm**
A project undertaken by the Montgomery County Public Schools to implement a commercial application to fulfill the administrative functions of human resources, payroll, and benefits for the Montgomery County Public Schools (MCPS).

Management Information Service -- **http://www.ccps.ga.net/admin/mis/mishome.htm**
Identifies the administrative activities conducted by the Management Information Services Department of the Clayton County Public School System.

Policies -- **http://www.asd.k12.ak.us/School_Board/Policy/500policy.html**
A database containing the on-line, electronic version of the Personnel Policies provided for Certificated Personnel of the Anchorage School District.

Policy Manual -- **http://www.howard.k12.md.us/policies/**
An on-line index to all Policies adopted by the Howard County Board of Education.

Risk Management -- **http://www.alief.isd.tenet.edu/riskmgmnt/default.htm**
An on-line Risk Management Information Center developed by the Alief Independent School District

II. Systems to Manage Systems and Information
(including Accountability / Quality Assurance / Evaluation) [cont.]

B. School - Wide Systems

2. Student Services (e.g. Student records, transportation, food service, etc.)

Information Services -- **http://www.window.state.tx.us/tpr/houston/hisd/hou09/hou09top.html**
A report that reviews the information technology and computer systems in the Houston Independent School District and contains five major subsections: Organization, Technology Infrastructure; Instructional Technology; Education Administration Technology; and Operations Technology.

Records Management -- **http;//www.ies.net/rcdmgmt/**
An on-line Records Management Service adopted by the Brownsville Independent School District.

Strategic Technology Plan -- ***http://205.232.151.90/info/stratplan/default.html***
A comprehensive, integrated information technology plan developed by the New York City Board of Education, the Center for Educational Leadership and Technology, and Teaching Matters to assist with planning efforts in the use of technologies for instructional and administrative functions and to coordinate and meld transitions from older technologies to new generation applications.

Videoconferencing Network -- **http://www.ccsd.net/HRD/vConf/vConfH.htm**
Developed by the Clark County School District's Human Resources Division, the Network utilizes videoconferencing technology in conjunction with the Internet to interview potential candidates for open job positions.

Food Services -- **http://www.tusd.k12.az.us/foodservices/fsemploy.htm**
An on-line service of the Tucson Unified School District providing information on School Meals and Services, Menu and Nutrient Analysis, Nutrition Information & Resources, The Fun Side of Food and Activities.

Customer Service -- **http://www.lausd.k12.ca.us/lausd/offices/Business_Services_Division/transportation/service.htm**
An on-line service developed by the Transportation Branch of the Business Services Division of the Los Angeles Unified School District to provide a one-stop, one-call level of service, available from 7:30a.m. to 5:30 p.m., to handle questions and concerns from the parents of our traveling students, school administrators, or anyone who is in need of assistance.

Dispatches -- **http://www.lausd.k12.ca.us/lausd/offices/Business_Services_Division/transportation/dispatch.htm**
An on-line dispatch service developed by the Transportation Branch of the Los Angeles Unified School District's Business Services Division to coordinate and mitigate school bus emergencies, accidents, incidents, breakdowns and "no one home to receive" Special Education Student situations.

Safety and Security -- **http://www.lausd.k12.ca.us/lausd/offices/Business_Services_Division/transportation/safety.htm**
An on-line service developed by the Transportation Branch of the Los Angeles Unified SchoolDistricts Business Services Division dealing with Safety Issues including School Bus Safety During Field Trips, Bus Stop Safety Rules, Bus Pass Requirements and Riding Instructions and related topics.

Emergencies -- **http://www.lausd.k12.ca.us/lausd/offices/Emergency_Services/**
An on-line directory of tools and checklists for dealing with emergencies offered by the Office of Emergency Services of the Los Angeles Unified School District.

Police Department -- **http://www.lausd.k12.ca.us/police**
An on-line directory of services provided by the Los Angeles Unified School District Police Department to assist students, teachers, administrators, and other staff in providing a safe and tranquil environment in which the educational process can take place.

II. Systems to Manage Systems and Information
(including Accountability / Quality Assurance / Evaluation) [cont.]

B. School - Wide Systems

3. Infrastructure (e.g. facilities management, heating, telecommunications, etc.)

Building Operations Generator On-Line Checklist used in Kent (WA) School District
http://www.kent.wednet.edu/KSD/FP/BO/forms/formmetr.html

Custodial Inspection On-Line Report Form used in the Kent (WA) School District
http://www.kent.wednet.edu/KSD/FP/BO/forms/formcust.html

Plant Maintenance and Operations Management System in Amarillo Indep. School District
http://maintenance.amarillo.isd.tenet.edu/actiew/menu.asp

Computerized Maintenance Management System --
http://www.kent.wednet.edu/KSD/FP/index2.html
An electronic work request system that allows staff of the Kent School District to file paperless, online requests for Maintenance or Building Operations services.

Materials Management and Systems Control -- **http;//www.dade.k12.fl.us/dmm/**
An on-line directory of ancillary services such as mail service, property tagging, auctions, textbook services, donations, and furniture acquisition of the Materials Management and Systems Control Division of the Miami-Dade County Public Schools.

Monthly Clean Campus Inspection Checklist of the Brevard County (FL) Public Schools
http://www.brevard.k12.fl.us/org/Eh&s/cleancampus1_.PDF

Online Project Design & Management -- **http://www.kent.wednet.edu/KSD/FP/index2.html**
Facilitated design, development, and management of Kent School District capital projects via the Internet.

Satisfaction Survey -- **http://dots.denver.k12.co.us/BFIfacmgmt.htm#SATISFACTION SURVEY**
Developed by the Denver Public Schools to give sites the opportunity to evaluate and rate the services provided by the Department of Facility Management/Maintenance.

Work Request -- **http://www.escambia.k12.fl.us/adminoff/maint/maintser/woframe/Frame.htm**
An on-line tutorial on completing a Maintenance Work Request provided by the Maintenance Department of the Escambia County Public Schools.

II. Systems to Manage Systems and Information (including Accountability / Quality Assurance / Evaluation) [cont.]

C. Classroom Level Systems

Using New Technologies with Students with Learning Problems
by Nettie Bartel. In D.D. Hammill & N. Bartel (1995), *Teaching Students with Learning and Behavior Problems*. (6th ed.). Austin, TX: pro-ed.

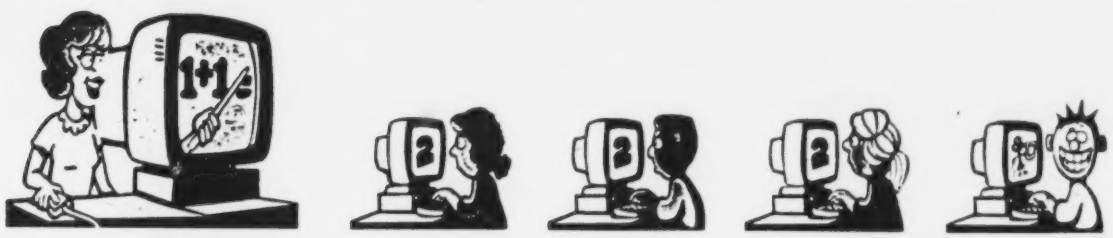
This chapter covers technology fundamentals and classroom applications. It includes listings of related professional resources.

Electronic Portfolios Enhance Health Instructions
by Shannon Corbett-Perez & Steve Dorman (1999). *Journal of School Health, 69*, 247-249.

"The ability to influence learning by controlling the pace, direction, and content of instruction offers exciting learning opportunities. By allowing nonlinear progression and 'instant' access to information in written, auditory, and simulated environments, computer-assisted instruction affects how students learn. However, the ability to utilize technology as teaching strategy and accurately assess progress concerns many school personnel. One technique of enhancing the potential of technology is the electronic portfolio... Traditional portfolios consisted of notebooks filled with paperwork representing weeks or months of student effort. However, issues associated with portfolios including storage, cost, handling, loss, evaluation, and time, remain problematic... electronic portfolios are used as professional development tools for school health educators to demonstrate teaching effectiveness and professional preparation."

The Union City story: Education reform and technology: Students' performance on standardized tests.
by H. Chang, A. Heriquez, M. Honey, D. Light, B. Moeller, & N. Ross (1998). From the Center for Children and Technology Reports.
Explores the role of technology in the performance of students with easy access to technology, compared to those not exposed (i.e.,. examins changes in students' performance when they had access to network technology at home and at school.
Available at -- http://www2.edc.org/CCT/cctweb/public/include/pdf/04_1998.pdf

"Did anybody learn anything?"
by J. McKenzie (1995). *The Educational Technology Journal, 5*.
Assessing technology programs and the learning accomplished. This document reviews the current research on evaluating the efficacy of technology-based learning programs. Examples of assessment instruments are provided.
Available at -- http://www.fno.org/dec95/simpletext.html



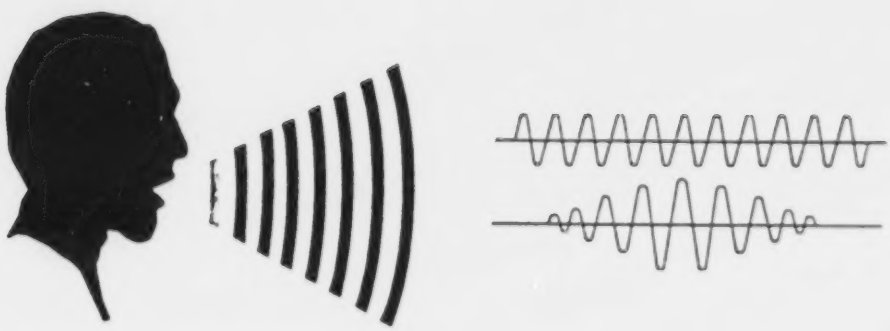
III. Technological / Multimedia Aids to Facilitate Intervention Activities

A. Assessment

B. Clinical Activity in Schools
1. Triage and Referral
2. Care Monitoring and Therapy

C. Promoting Healthy Social and Emotional Development
(mental health education, enrichment)

D. Supporting Special Education with Assistive Technology



III. Technological / Multimedia Aids to Facilitate Intervention Activities

A. Assessment

Software Applications for Behavioral Health: A Directory and Resource Guide

Directory provides community behavioral healthcare providers with basic information that will enable them to answer questions on what software is available, what it will do, and how to get more information.

Contact: National Community Mental Health Council (301) 984-6200 / Fax: 881-7156

Teen Challenge (software)

An interactive CD-ROM tool to help counselors identify adolescents at risk. The CD-ROM asks questions, answers are confidential; an analysis is printed for both the teen and the counselor. Developed by Kaiser Permanante, the program was tested in a two year pilot program at Oakland Technical High School, and Planned Parenthood of New York City, among other high schools. It is geared for the 13-19 year old and available to schools and community clinics, who must provide counseling sessions after the program and referrals to other resources as needed.

Contact: Kaiser Permanante, Tom Debley, Lila Petersen, or Ann Mosher (510)987-3900

PERIL (Project Earth Risk Identification Lifeline) (software)

This interactive CD-ROM game lets teens (12 through 16) test their knowledge of risky behavior. Created for the classroom, the game includes a classroom guide, and teaching exercises.

Contact: Canadian Network of Toxicology Centres, University of Guelph, Guelph, Ontario, Canada (519)824-4120 x 2950; fax: (519)837-3861 peril@tox.uoguelph.ca www.uoguelph.ca/cntc/

Special Education Software for Grades K-12. In *TIMES*. by Cambridge Development Laboratory (Fall, 1999).

This special issue of the magazine includes information on interactive software for K-12 children. The focus centers around language arts and mathematics.

Contact: Cambridge Development Laboratory 1-800-637-0047 www.cdlspecial.com

Reaching Hard-to-Reach Populations: Interactive Computer Programs as a Public Information Campaigns for Adolescents *Journal of Communication, 37*. by R. Hawkins, D. Gustafson, B. Chewing, K. Bosworth, P.M. Day (1987).

Discusses interactive computer programs and how they can be used to better information campaigns. The main example used is BARN (Body Awareness Resource Network) a software that has been successful in attracting hard-to-reach populations. The goal of BARN is to provide a system of interactive computer programs that allow adolescents to access confidential, nonjudgmental health information. It is a place where adolescents can find strategies and referrals to their questions. The program is there to encourage responsible decision making.

Equity issues in the Star Schools distance learning program. *Journal of Educational Computing Research, 13*, 173-183. by Naida C. Tushnet and Treseen Fleming-McCormick (1995).

"The Star Schools distance learning program, sponsored by the U.S. Department of Education is charged with serving 'underserved' students." The distance learning program consists of exposing children from elementary level to high school level in using audiographics. Each technology, with its strengths and limitations continues to be used in various localities to increase student access to learning opportunities, but there is no consistency across the nation. The primary focus of the analysis was on Star Schools distance learning services to students in remote rural areas, and students in schools serving large numbers of minority and economically disadvantaged students. The article concludes with a discussion of the policy issues raised by these findings, along with a discussion of policy mechanisms that could be used to ensure that the equity objectives of the Star Schools program are achieved.

C.I.T.E. Learning Styles Inventory.

The C.I.T.E. Learning Styles Inventory is based on the C.I.T.E. Learning Styles and assesses nine factors considered necessary for school success: visual language, visual numerical, auditory language, auditory numerical, audio/visual/kinesthetic, individual learner, group learner, expressive oral, expressive written. This is one of several assessment systems that uses a combination of video, print, and computer presentations for flexibility in administration.

Contact: JIST Works, 720 North Park Avenue, Indianapolis, IN 46202-3431.

Excerpts from ERIC Digest:

*Electronic Portfolios: A New Idea in Assessment**

Anna Maria D. Lankes

INTRODUCTION

Teachers and administrators are showing increased interest in becoming part of a "new wave" of assessment in the classroom; assessment which includes authentic and performance-based measures. These methods of assessment allow students to demonstrate desired performance through real- life situations (Meyer, 1992). Such methods of assessment are not limited to multiple-choice and standardized tests, but include projects which require students to demonstrate their problem-solving skills as well as their skills in analyzing and synthesizing information. Several school districts across the United States have reported improved student performance associated with new assessment programs (Herman, 1992). Many schools are developing new methods for measuring students' progress in both the elementary and secondary classroom. One of these new assessment measures, the portfolio, has become increasingly popular, and technology is helping with its creation and management.

WHAT IS A PORTFOLIO?

A portfolio at the K-12 education level is essentially a collection of a student's work which can be used to demonstrate his or her skills and accomplishments. An educational portfolio is more than just a group of projects and papers stored in a file folder...

TECHNOLOGY AND THE CREATION OF COMPUTER-BASED PORTFOLIOS

How to store and manage portfolio materials is a concern shared by many educators interested in implementing portfolio programs. In order to keep portfolios which would include papers, projects, and video and audio tapes for a class of students for 13 years (K-12), a school would need several additional classrooms to store this wealth of information. Many educators have been reluctant to implement portfolio assessment programs in their schools because of storage concerns like these. A likely solution to this problem is the creation and storage of portfolios using computer technology.

The terms "computer-based portfolio" and "electronic portfolio" are used to describe portfolios saved in electronic format. Electronic portfolios contain the same types of information as the portfolios discussed earlier, but the information is collected, stored, and managed electronically. Since current technology allows for the capture and storage of information in the form of text, graphics, sound, and video, students can save writing samples, solutions to mathematics problems, samples of art work, science projects and multimedia presentations in one coherent document. A single computer with a large storage capacity can store portfolios for all of the students in a class. With more students creating multimedia projects, however, a floppy or even a hard disk might not suffice for storage. An alternative is to store student portfolios on a CD-ROM (a compact disk which stores text, sound, graphics and video). A CD-ROM can store approximately 650 MB of information or 300,000 sheets of typed text. This might include all of the portfolios for an entire grade level of students. A computer-based portfolio program also allows for easy transfer of information. An individual computer disk or CD-ROM could be created to transport a student's documents from teacher to teacher or school to school...

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**ERIC Digest* (1995) ED390377: Available from: ERIC Clearinghouse on Information & Technology, Syracuse University, 4-194, Center for Science and Technology, Syracuse, NY 13244-4100 e mail: eric@ericir.syr.edu http: /ericae.net edo ED390377.htm

ERIC/AE Digest.
http://ericae.net/edo/ED385609.htm

Assessment & Evaluation on the Internet

Authors: L. Drake and L. Rudner

With tens of thousands of information providers and millions of users, Internet is an enormous and growing resource for measurement professionals, researchers, curriculum developers, evaluation personnel and others involved or interested in assessment issues. The task for busy professionals is to be able to rapidly identify Internet resources so they can be efficiently incorporated in their work.

In this digest, we identify Internet resources of particular interest to the assessment community. Gopher sites and web sites are identified and discussed.

GOPHER AND WORLD WIDE WEB SITES

Gophers are menu-driven systems providing access to a wide range of information. Often you can access Gopher from a mainframe system prompt by typing GOPHER and the gopher address, e.g. GOPHER GOPHER.CUA.EDU. The World Wide Web (WWW) is an Internet service which presents information using hypertext and, with the appropriate software, fonts and images. Netscape, Lynx, and Mosaic are popular software packages for "browsing" the web. Where available, we also provide WWW addresses. They are in parens and begin with "http://".

>>>AMERICAN EDUCATIONAL RESEARCH ASSOCIATION (AERA)
gopher to info.asu.edu/ASU Affiliate Organizations/AERA (http://www.asu.edu/aff/aera/home.html)
AERA is a professional organization comprised of scholars in all of the social sciences related to educational research. AERA offers its divisions and SIG's (Special Interest Groups), descriptions of its fourteen listservs, publications, and an enormously valuable file entitled, "Resources from Around the World for Educational Researchers." Division D is concerned with measurement and methodology and Division H addresses evaluation concerns.

>>>AMERICAN EVALUATION ASSOCIATION (AEA) -- (http://ua1vm.ua.edu/~eal/aea.html)
This home page contains information about AEA sponsored listservs and provides direct web access to the files available on the AEA file server. Of special interest are an evaluation job bank, the program evaluation standards, and the personnel evaluation standards.

>>>ARIZONA STATE UNIVERSITY COLLEGE OF EDUCATION
gopher to info.asu.edu/ASU Campus-Wide information/College of Education/Other Education Gophers (http: info.asu.edu/asu-cwis/education/home.html)
Every professional in education should know this gopher site and have it in their bookmark file. Gene V Glass has created a comprehensive and well-organized set of directories covering all aspects of education. Some of the fifteen menu options cover: Best of the Internet for Educators Centers, Laboratories and Clearinghouses for Education; Full text Electronic Journals Resources for K-12 Education; as well as Scholarly Resources for Educational Research and Technology in Education.

>>>BUROS INSTITUTE OF MENTAL MEASUREMENTS -- (http://www.unl.edu/buros/home.html)
By providing professional assistance, expertise, and information to users of commercially published tests, the Institute promotes meaningful and appropriate test selection, utilization, and practice. Their web site features information about the Institute, articles to promote responsible test use, and the Buros Test Review Locator. The Locator is a joint project with ERIC/AE (below) which can help you identify which of the Institute's publications reference particular tests.

(cont.)

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>>>ERIC CLEARINGHOUSE ON ASSESSMENT AND EVALUATION (ERIC/AE)
gopher to gopher.cua.edu/Special Resources/ERIC Clearinghouse on Assessment and Evaluation (http://www.cua.edu/www/ericmae/)

At the ERIC/AE Web and Gopher sites, you will find measurement and evaluation news; full text resources including books, essays, and newsletters on assessment and evaluation; test schedules of major standardized tests; the Test Locator; places to search ERIC databases; descriptions of major testing projects; materials pertaining to Goals 2000 and world class standards; and pointers to other gopher sites containing assessment and evaluation information. Of special interest is the Test Locator Service, a collaborative effort of ERIC, the Educational Testing Service (ETS), the Buros Institute, and Pro-Ed Publishers. The Test Locator contains descriptions (including publisher addresses) of over 10,000 instruments to measure a broad array of interests, aptitudes, skills, and academic achievement.

>>>ERIC CLEARINGHOUSE ON INFORMATION & TECHNOLOGY (ERIC/IT)
gopher to ericir.syr.edu (http://ericir.syr.edu)

AskERIC maintains a large Gopher site providing access to a wide range of material. Of particular interest are the AskERIC Infoguides. Each Infoguide includes pertinent ERIC document citations and various Internet resources, such as appropriate listservs and pointers to gopher/ftp sites. Some relevant Infoguide titles are: Authentic Assessment, Outcome-Based Education, Technology-Plans, and Testing.

>>>EDUCATIONAL TESTING SERVICE (ETS) -- gopher to gopher.ets.org

This gopher provides general information about ETS and its programs. We were most impressed by the set of files on computer-based testing (CBT). Users will find discussions of current security issues and their implications for the scheduling of computer-based tests; explanatory files on computer adaptive testing and computer mastery testing; and state-by-state lists of CBT sites. The ETS Presidential Files contain extensive information on "What Every School Should Know About Testing Students with Disabilities."

>>>THE EVALUATION CENTER AT WESTERN MICHIGAN UNIVERSITY
gopher to gopher.wmich.edu/Western Michigan University/Evaluation Center/CREATE

The Center for Research on Educational Accountability and Teacher Evaluation conducts a wide range of projects for student, teacher, administrator, and school evaluation. Abstracts and texts of its research and technical papers will be posted here as this site develops.

>>>NATIONAL CENTER FOR RESEARCH ON EVALUATION, STANDARDS, AND STUDENT TESTING gopher to spinoza.cse.ucla.edu/Research on Evaluation and Testing/CSE-CRESST Alternative Assessment Database or Products Available (http://www.cse.ucla.edu/CRESSTHome.html)

CRESST offers searchable newsletters and technical reports, as well as descriptions of its videos and handbooks on alternative assessment. Its large Alternative Assessment Database is maintained in concert with the NWREL (see entry below); at this gopher site, the database is called the CSE/CRESST Alternative Assessment Database. CRESST also provides access to the CRESST Line Newsletter, Evaluation Comment, and general interest papers.

>>>NATIONAL COUNCIL ON MEASUREMENT IN EDUCATION -- Gopher to assessmnt.iupui.edu, NCME

This site plans to provide instructional materials on educational measurement, measurement software, job announcements, measurement related news and pointers to other measurement related information.

>>>NORTH CENTRAL REGIONAL EDUCATION LABORATORY (NCREL)
gopher path: gopher.cic.net/Other CICnet Projects & Gopher Servers/NCREL/North Central Regional Education Laboratory (NCREL)/Education Resources by Subject/Assessment

Here one finds a long essay entitled, "What Does Research Say About Assessment," which includes a bibliography of reference resources for the topic. There is also a press insert entitled, "Authentic Assessment: Measuring Learning in a Way That's Real for Children," which may be used for educational newsletters and other publications. Other subjects of possible interest to measurement experts include Educational Policy and . Goals and Standards.

(cont.)

>>>NORTHWEST REGIONAL EDUCATIONAL LABORATORY (NWREL)
gopher to gopher.nwrel.org/NWREL Program and Content Areas/Evaluation and Assessment OR Science and Mathematics Education

Under Evaluation and Assessment, you will find bibliographies on alternative assessment as it pertains to portfolios, mathematics and science, and reading. Under Science and Mathematics Education, you will find the program for which the Center, in collaboration with the other nine federally funded Regional Educational Laboratories and CRESST, collects, reviews and offers instruments for alternative assessment in science and mathematics. At this gopher site, that program is named the Laboratory Network Program on Alternative Assessment (LNP-AA). Its database of alternative assessment instruments and procedures, as well as annotated bibliographies, are online.

>>>THE PRINCETON REVIEW -- gopher to bloggs.review.com (http://199.79.226.10:80/)

The Princeton Review is a full-service preparatory service for college, graduate school, and professional school admissions processes. It offers: information about testing companies including phone numbers; test taking problems; what's new in testing; information on college admissions, college rankings, financial aid; and career advice.

>>>QUESTION MARK COMPUTING -- (http://www.qmark.com)

This British site devoted to Computer Aided Assessment features QM Web, a system for delivering tests, exams, tutorials and surveys on the world wide web. The site also provides a variety of links to testing and assessment internet resources.

>>>U.S. DEPARTMENT OF EDUCATION
gopher to gopher.ed.gov/Search all USDE Menus using Jughead/(http://www.ed.gov/index.html)

There is such a profusion of essays and descriptions of federal and state programs, including important information about and from the National Assessment of Educational Progress (NAEP), that, in gopher, the user is advised to summon them by the truncated (i.e., abbreviated) indexing terms indicated above. (Hint: be sure to type in the terms and punctuation exactly as you see them above.). At both the gopher and www sites, you can find the National Education Goals, Researchers' Guide to the Department of Education, and various U.S. Department of Education publications in full-text.

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Authors: Drake, Liselle; Rudner, Lawrence

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FOR MORE INFORMATION ABOUT ERIC, CONTACT ACCESS ERIC 1-800-LET-ERIC

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III. Technological / Multimedia Aids to Facilitate Intervention Activities

B. Clinical Activity in Schools

1. Triage and Referral

2. Care Monitoring and Therapy

III. Technological / Multimedia Aids to Facilitate Intervention Activities

B. Clinical Activity in Schools

1. Triage and Referral

PERIL (Project Earth Risk Identification Lifeline) (software)

This interactive CD-ROM game lets teens test their knowledge of risk behavior. It was created for adolescents age 12 through 16. Created for the classroom, the game includes a classroom guide, and teaching exercises.

Canadian Network of Toxicology Centers, University of Guelph
Guelph, Ontario, CANADA (519) 824-4120 x2950; fax: (519) 837-3861
peril@tox.uoguelph.ca www.uoguelph.ca/cntc/

Getting America's Students Ready for the 21st Century: Meeting the Technology Literacy Challenge

by Department of Education (1996)

The booklet includes information on technological literacy, the challenges, the goals, the investments that are needed, and how to get involved. The benefits of a technological advancement include: enhanced student achievement better assessment of student progress, increased family involvement, improved teachers skills, and improved school administration and management. The report indicates how goals will be met and what will make them successful. The report also discusses the effectiveness of continuous development of educational software and on-line learning resources.

Contact: Department of Education, www.ed.gov (800) USA-LEARN

Improving Client Outcomes: The Kansas Technical Assistance Consultation Project

by William Patrick Sullivan, PhD & Charles A. Rapp, PhD

Outreach consultation services/technical assistance proves an effective way to transfer relevant knowledge necessary to improve professional practice to the active practitioner.

Information Systems to Support Comprehensive Human Services Delivery: Emerging Approaches, Issues, and Opportunities .

by C. Marzke, D. Both, & J. Focht (1994).

Nationwide study of information technology in reference to service delivery.

Contact: National Center for Service Integration (515) 280-9027 / Fax: 244-8997

A Computerized School-Based Health Assessment with Rapid Feedback to Improve Adolescent Health

by A. Bracken, A. Hersh, & D. Johnson (1998) in *Clinical Pediatrics, 37*, 677-83

Discusses a procedure developed to detect health problems that often go undetected in doctors offices. The students participate in a self administered questionnaire, that is later analyzed, following that they receive a personalized letter outlining their health problems.

BARNY: A Computer Based Health Information System for Adolescents

by K. Bosworth, B. Chewing, T. Day, R. Hawkins, & D. Gustafson in *Journal of Early Adolescence, 1, 315-321.*

This article describes the BARN (Body Awareness Resource Network) program and its impact. BARN is designed to make health education accessible to adolescents via computer. Its intent is to enhance adolescent skills in decision making.

Contact: Kris Bosworth, University of Arizona, College of Education,
P.O. Box 210069, Tucson, AZ 85721-7828. Ph: 520/621-7828

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Teachers and Instructional Technology: Wise or Foolish Choices
by L. Green (1995) in *Intercultural Development Research Association Newsletter, Vol XXII (Dec.)*
The IDRA newsletter disseminates information concerning equality of educational opportunity; In this issue, articles deal with a range of topics including: technology, education, outreach.
Contact: Intercultural Development Research, 5835 Callaghan Road, Suite 350
San Antonio, TX 78228-1109

Teaching Exceptional Children, V. 30. (May/June, 1998)
The entire issue is devoted to the "World Wide Web & Special Education" It includes articles that cover multimedia for the deaf, researching and publishing for children with disabilities, and current problems in web design that make it hard for disabled students to access information, along with how to correct those problems.

Educational Leadership, V. 56. (February, 1999)
The entire issue is devoted to "Integrating Technology Into The Curriculum" It includes article discussing plans for teachers to develop lessons on the computer that cater to children with disabilities. The magazine includes articles that cover multimedia for the deaf, researching and publishing for children with disabilities, and current problems in web design that make it hard for disabled students to access information, along with how to correct these problems. Topics include: Creating websites, doing research, preparing Internet-based lessons, improving reading skills through computer use, and profiles of skills that students need at every level for technological literacy. One article, Technology is for Everyone (p. 33), by Joyce A. Burtch, discusses special-needs kids who hook up with key pals and share stories about their days.

Years of Promise: A Comprehensive Learning Strategy for America's Children. **Chapter 5 : Learning in the Electronic Playground** (1996)
This Carnegie Task Force Report on Learning in the Primary Grades deals with reversing educational under-achievement. It examines community-based projects, after school programs, and the use of media as a tool in order to aid in healthy development and learning of children. Information in this report investigates evidence for the preparation of all children through programs such as Head Start. The report also discusses issues of family and community learning, early intervention in education, and tools for creating successful elementary schools.
Contact: Carnegie Corp. of New York, P.O. Box 753, Waldorf, MD 20604 Ph: 301/645-2742
e-mail: ccny@tasco.com http://www.carnegie.org

Computers and Art Education (1997)
by J.C. Matthews In ERIC Digest. http://ericae.net/edo/ED410180.htm
Describes how computers have evolved into art education. The use of computers in the art world is highly used among graphic designers and they have recast the face of computers by trying to introduced it into the classroom.

Interactive Case Studies in Behavioral Disorders: Looking at Children from Multiple Perspectives
by L. Semrau & G. Fitzgerald (1995). *Education and Treatment of Children, 18,* 349-359.
Describes the rationale and interactive program for training personnel to work with children with emotional and behavioral disorders. When completed, the series will include three additional packages covering assessment, planning, instruction, and management, and systematic observation. All operate on either Mac or Windows. A Videodisc, computer software, and an instructors manual are provided for each program.

A computer-based violence prevention intervention for young adolescents: pilot study.
by K. Bosworth, D. Espelage, & T. Dubay (1998). *Adolescence, 33,* 785-795.
A multimedia tool (SMART Talk) teaches anger management, perspective taking, and mediation skills using games, interactive assessment interviews, cartoons, and animation. Its use increases knowledge and practice of prosocial behaviors.

DIADS: Computer-Based System for Development of School Prevention Programs
by K. Bosworth & R. Yoast.(1991). *Journal of Drug Education, 21.*
The Drug Information, Assessment and Descriptions for Schools (DIADS) provides access to a cost-effective planning resource that has information to programs about alcohol, other drugs and prevention. The program also helps schools assess the effectiveness of their current prevention programs. The program also provides suggestions for improvements in current school prevention programs.

III. Technological / Multimedia Aids to Facilitate Intervention Activities

B. Clinical Activity in Schools

2. Care Monitoring and Therapy

Welligent: Intelligent Student Health Management

"Welligent is a comprehensive software system which documents student health status and school health services, bills, tracks reimbursable health services and provides information resources to assist school administrators in making sound policy decisions." Developed by the Center for Pediatric Research, a program of Children's Hospital of the King's Daughters and Eastern Virginia Medical School. Consists of five modules, which are; Special Education Module, Billing Module, Administration Module, Wellreports: the Report Module, and School Clinic Module. Meets FERPA (Federal Education Rights and Privacy Act). Also provides a comprehensive training program for new users. Free interactive CD-ROM demonstrates its applications.

Website: http://www.welligent.org Toll free: 877-546-7516

Therapist Helper (software)

This software was created to help therapists with billing, reports, and scheduling. A version is available for the Palm Pilot (Therapist Traveler).

Brand Software, Inc., 500 West Cummings Park, suite 1950
Woburn, MA 01801-6514 1-800-343-5737 www.helper.com

Practice Management Software

Helps with statements, claim forms, reports, scheduling, and managed care paperwork. Available for individual professionals or large group practices.

Applied Computing Services, 2764 Allen Road West
Elk, WA 99009 www.pma2000.com 1-800-553-4055

Telepsychiatric Treatment of a school-child

by M. Rendon (1998). *Journal of Telemedicine and Telecare, 4,* 179-82.

This case report describes the use of telepsychiatry to treat a child with a disruptive behavior problem and how the association that youngsters make between videoconferencing and television and computer games actually contributed to the effectiveness of the treatment.

The Home/School/Community Connection. (Innovative Schools Reaching Beyond Their Walls)

by A. H. Orwig (1994). *Technology and Learning, 15,* 12-16

Discusses a few innovative educational partnerships for increasing parental and community involvement, sharing resources, and enhancing students' educational experience.

The Use of Two-Way TV in Bringing Mental Health Services to the Inner City.

by N. Straker, P. Mostyn, & C. Marshall (1976). *American Journal of Psychiatry, 133,* 1202-1205.

Describes a cable TV link between a medical school and a child health station in East Harlem. Nurse associates and community health workers trained through television conferences with a child psychiatrist have primary responsibility for patient care at the clinic. Patients and their mothers are evaluated by the child psychiatrist in TV consultations at which nurse associates, health workers, medical students, and child psychiatric fellows are present. Patients and mothers respond positively to the system, and a high percentage of the psychiatrist's treatment recommendations are accepted. The authors suggest that such TV links can increase mental health services to underserved inner-city children.

III. Technological / Multimedia Aids to Facilitate Intervention Activities

C. Promoting Healthy, Social, and Emotional Development (mental health education and enrichment)

The Internet and Your Family (Pamphlet)

Information for beginner Internet users and their families. Includes links for children and children with special needs, along with health and medical sites for parents. Gives brief description of Email, list servers, chat rooms and news groups

Contact: American Academy of Pediatrics, Division of Publications,
144 Northwest Point Blvd., P.O. Box 747
Elk Grove Village, IL 60009-0747 www.aap.org

The Computerized Self-Help Clearinghouse: Using "High Tech" to Promote "High Touch" Support Networks

by E. Madara, J. Kalafat, & B.N. Miller (1988). *Computers in Human Services, 3,* 39-53.

Describes the need for a variety of self-help groups through the use of computers and telecommunications.

Human Services and The Self-Help Clearinghouse Concept

by R. Wollert (1987). *Canadian Journal of Community Mental Health, 6,* 79-90.

Abstract: "Self-help groups hold the potential for helping many persons adjust to life stresses. This self-help clearinghouse concept is a community-centered approach toward developing and realizing this potential. This paper presents a history of clearinghouses and an overview of the services they provide ... [and discuss] planning issued and implementation strategies...clearinghouses may give rise to an exciting new practice specialty that integrates service and research..."

Toward a Technology in Primary Prevention: Educational Strategies and Tactics

by M. Bloom (1987). *Journal for Primary Prevention, 8,* 25-48.

Abstract: "...explores the nature of preventive/promotive technology. Examples of primary prevention programs illustrating the various issues in such a technology are given. A model for educational technology is provided: the application of systematic procedures that can be employed in concert to affect factors which prevent predictable problems, protect current health functioning, and/or promote desired potentials...This assigned paper is 'limited' to primary prevention technology related to education..."

Knowing Myself; Interactive Computer Programs

by M.G. Danielson & W.E. Danielson

These self-profiles are a series of interactive computer programs which allow the respondents to view their individualized philosophical outlook profiles and receive a verbal description of the resulting preferential outlook. There are three programs packaged on a single PC diskette.

Contact: Pacific Psychological, 710 George Washington Way, Suite 6
Richland, WA 99352.

Wellness Inventory (Third Edition)

by J.W. Travers

Measures individuals' perceptions of their degree of wellness rather than the degree of illness. This is an abridged version of the Wellness Index (TC015945). Has a graphic self-scoring wheel to give respondent a picture of his or her self perceptions of wellness. Provides and introduction to the concept and practice of wellness. Can also be self-administered interactively on a microcomputer, including IBM and compatibles, Macintosh Plus, SE, and II. Hypercard software comes with new computers.

Contact: Wellness Associates; Box 5433; Mill Valley, CA 94942.

School Health Starter Kit
for Promoting Coordinated School Health Programs

Developed by the Association of State and Territorial Health Officials (ASTHO) and the Council of Chief State School Officers (CCSSO)

This multimedia promotional kit includes a CD-ROM "allowing users and designers to customize the kit for a specific state or community." It represents a state-of-the-art model of adopting technology for health promotion.
Contact: ASTHO, 202/371-9090

ONLINE MENTORING

The Benefits of Online Mentoring for High School Girls: Telementoring Young Women in Science, Engineering, and Computing Project [3 Year Evaluation]

Excerpt from: Center of Children & Technology Reports

Since 1988, EDC's Center for Children and Technology (CCT) has conducted several investigations into the relationship between gender and technology that shed light on the needs of young women who are working in or considering careers in engineering or computing (Bennett, 1993; 1996; Brunner, Hawkins, and Honey, 1998; Brunner, 1991; Hawkins, 1991; Hawkins et al., 1990; Honey, 1994; Honey et al., 1991; 1994). These studies point to the many tensions and conflicts that young women experience when contemplating or pursuing technical and scientific courses and careers. Girls in high school pre-engineering classes reveal their feelings of isolation and the challenges they encountered when they approached their technical or design work differently from their male peers (Bennett, 1993; 1996). There was no one to validate the difficulties they were experiencing, and there were no female mentors to share similar experiences and help them craft strategies for dealing with these issues. This, in turn, resulted in many of the students questioning their own abilities to succeed in engineering.

With funding from the National Science Foundation, the *Telementoring Young Women in Science, Engineering, and Computing* project was created to develop and test online mentoring environments in which high school girls could safely discuss their school experiences with practicing women professionals who had "made it" in science and technical fields. Central to the project's goal was the belief that ongoing electronic communication with successful women engineers and scientists could provide girls with validation and advice rarely found in traditional educational settings. Because young women do not have easy access to professionals, we speculated that telecommunications could be a particularly appropriate medium for providing this kind of support. Through online conversations and discussions, professionals could address many of the girls' apprehensions, tensions, and questions by providing expert knowledge, useful strategies for overcoming fears and obstacles, and sound career advice. We also speculated that this additional support could help sustain girls' interest in science and technical fields and broaden their awareness of different career options....

Excerpted from: Bennett, Dorothy, Honey, Margaret, Hupert, Naomi, Meade, Terri, & Tsikalas, Kallen. (1998) The benefits of Online mentoring for high school girls: Telementoring young women in science, engineering, and computing project, Year 3 Evaluation. http://www2.edc.org/CCT/cctweb/public/include/pdf/09_1998a.pdf

III. Technological / Multimedia Aids to Facilitate Intervention Activities

D. Supporting Special Education with Assistive Technology

Technological / Multimedia Aids for Disabilities

Excerpted from Center for Children & Technology Report (Oct., 1996), *Literacy Network: Using Computer Network Technology to Support Deaf Students' Meaning Making in Science.**

Computer network technology has great promise for enhancing deaf students' literacy practice in school. Typically, this technology has software programs for word processing, for group conferencing, for sending and receiving electronic mail (e-mail), and for data storage and analysis (database programs). The integration of this technology into subject matter areas makes it possible for deaf students to share their thoughts and ideas with teachers and other students in writing, and thus to experience written language as a tool for communication and thinking in the context of meaningful learning activities. This kind of approach towards learning reading and writing has been advocated by educators of the deaf (e.g., Johnson, Liddell, &Erting, 1989; Luckner & Isaacson, 1990; Staton, 1985), and its effectiveness has been demonstrated by both cognitive and educational research (e.g., Peyton, 1988; Staton, 1985).

References

Johnson, R. E., Liddell, S. K., & Erting, C. J. (1989). Unlocking the curriculum: Principles for achieving access in deaf education (Working Paper No. 893). Washington, D.C.: Gallaudet Research Institute, Gallaudet University.

Luckner, J. L. & Issacson, S. L. (1990). Teaching expressive writing to hearing-impaired students. Journal of Childhood Communication Disorders, 13(2), 135-152.

Moeller, Babette. Center for Children & Technology. Literacy Network: Using Computer Network Technology to Support Deaf Students' Meaning Making in Science. CCT Reports, Issue No. 10, October 1996. http://www2.edc.org/CCT/cctweb/public/include/pdf/10_1996a.pdf

Staton, J. (1985). Using dialogue journals for developing thinking, reading, and writing with hearing-impaired students. The Volta Review, 87(5), 127-169.

Peyton, J. K. (1988). Computer networking: Providing a context for deaf students to write collaboratively. Teaching English to Deaf and Second Language Students, 6(2), 19-24.

*Available from Internet -- http://www2.edc.org/cct/cctweb/public/include/pdf/10_1996a.pdf

III. Technological / Multimedia Aids to Facilitate Intervention Activities

D. Supporting Special Education with Assistive Technology (cont.)

Opening the Doors to Learning: Technology Research for Students with Learning Disabilities by the Office of Special Education Programs, U.S. Department of Education

This Instructional Practices "How-To Guide" and Video provide information about technology tools proven through extensive research to be effective with students with learning disabilities. The text is available in both browsable and PDF versions; video segments require RealPlayer software for viewing.

http://www.ldonline.org/ld_indepth/technology/opening_the_door_luke.html

Interactive Case Studies in Behavioral Disorders: Looking at Children from Multiple Perspectives by L. Semrau & G. Fitzgerald (1995). *Education and Treatment of Children, 18*, 349-359.

Describes the rationale and interactive program for training personnel to work with children with emotional and behavioral disorders. When completed, the series will include three additional packages covering assessment, planning, instruction, and management, and systematic observation. All operate on either Mac or Windows. A Videodisc, computer software, and an instructors manual are provided for each program.

"What's Best for Matthew" (software)

This interactive CD-ROM case study was developed to help preservice and inservice teachers develop their own Individual Education Program (IEP).

Pearson Education Group, 160 Gould St., Needham Heights, MA 02494-2315
Ph: 781/455-1250; fax: 781/455-1220

Teaching Exceptional Children, V. 30. (May/June, 1998)

The entire issue is devoted to the "World Wide Web & Special Education" It includes articles that cover multimedia for the deaf, researching and publishing for children with disabilities, and current problems in web design that make it hard for disabled students to access information, along with how to correct those problems.

Educational Leadership, V. 56. (February, 1999)

The entire issue is devoted to "Integrating Technology Into The Curriculum" It includes article discussing plans for teachers to develop lessons on the computer that cater to children with disabilities. The magazine includes articles that cover multimedia for the deaf, researching and publishing for children with disabilities, and current problems in web design that make it hard for disabled students to access information, along with how to correct these problems. Topics include: Creating websites, doing research, preparing Internet-based lessons, improving reading skills through computer use, and profiles of skills that students need at every level for technological literacy. One article, Technology is for Everyone (p. 33), by Joyce A. Burtch, discusses special-needs kids who hook up with key pals and share stories about their days.

Solicitation for Safe School Technologies (Booklet)

Information regarding solicitation seeking proposals to develop new or improved technologies to national schools. Overview of the program, and how to move forward with your proposal.

Contact: National Criminal Justice Reference Service, Box 6000
Rockville, MD 20849-6000 Ph: 800/851-3420; e-mail: askncjrs@ncjrs@.org.
www. ojp.usdoj.gov/nij

Readings on the Use of Technology for Individuals With Disabilities

http://ericec.org/minibibs/eb16.htm

from The ERIC Clearinghouse on Disabilities and Gifted Education (ERIC EC)
The Council for Exceptional Children
1920 Association Drive, Reston, VA 20191
Toll Free: 1-800-328-0272 | TTY: 703-264-9449
E-mail: ericec@cec.sped.org | Internet: http://ericec.org

ERIC EC Minibib EB16 (July 1996)
Compiled by Janet Drill and Barbara Sorenson.

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Aedo, I. (1994). A teaching methodology for the hearing impaired using hypermedia and computer animation. Journal of Computing in Childhood Education, 5(3/4), 353-69. UMI.

This article examines the possibilities and advantages of computers in teaching hearing-impaired children. A method of using computers to improve the spoken and written communication skills of the hearing impaired is presented which suggests that hypertext and multimedia technologies can be successfully applied to speech therapy teaching, lip-reading teaching, hearing training development, vocabulary teaching, morphosyntactic-structure teaching, and reading instruction.

Anderson, M. A. (1991). Technology integration for mainstreamed students. Computing Teacher, 18(4), 6-8. UMI.

A discussion of the successful integration of technology to assist students with mild disabilities in mainstreamed classrooms highlights the role of the teacher. Three research studies are described: one with elementary schools, one with middle schools, and one with high schools. Curriculum objectives, student needs, group learning, and teacher training are also discussed.

The Arc. (1994). How to evaluate and select assistive technology. (ED376664) 4p. ERIC Document Reproduction Service (EDRS)

This digest discusses assistive technology for children and adults with mental retardation and other disabilities. Assistive technology is used to compensate for functional limitations and to enhance and increase learning, independence, mobility, communication, environmental control, and choice. A checklist is provided that covers user questions, vendor questions, device performance, convenience, reliability, safety, and practicality.

Brett, A. (1995). Technology in inclusive early childhood settings. Day Care & Early Education, 22(3), 8-11. UMI.

This article examines whether to make computers a part of the early childhood curriculum. It discusses the contribution of computers to children's development, focusing on the role of computers and related technology in benefiting children with disabilities, facilitating inclusion, and ways of adapting technology.

Brett, A., & Provenzo, E.F., Jr. (1995). Adaptive technology for special human needs. SUNY series, Computers in education. State University of NY Press, State University Plaza, Albany, NY 12246. 164pp.

This publication describes the use of computers to augment the schooling and daily functions of individuals with disabilities, and details currently available hardware and software systems in four areas of disability: visual impairment, hearing and speech impairment, physical impairment, and cognitive impairment (learning disabilities and mental retardation). Four uses of adaptive technology are identified that apply to all ages: spoken and written communication; cognitive stimulation and development; recreation, leisure, and play; and environmental control. Adaptive technology applications in education are described.

(cont.)

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Button, C., & Wobschall, R. (1994). The Americans with Disabilities Act and assistive technology. Journal of Vocational Rehabilitation, 4(3), 196-201. UMI.
This paper provides a synopsis of each section of the Americans with Disabilities Act (ADA) and the relationship of assistive technology to the needs and mandate of the section. Numerous suggestions are included for assistive technology devices that may be effective resources for ADA compliance.

Ellsworth, N.J. (1994). Applications of technology for students with learning disabilities: A survey of New York City schools. LD Forum, 20(1), 21-24pp. Council for Learning Disabilities, PO Box 40303, Overland Park, KS 66204.
Results are presented of a study on applications of technology employed in New York City schools with students with learning disabilities (LD). Study explored the availability and frequency of use of 14 types of technology, as well as 68 teachers' views on what kinds of technology would be most helpful. Info was obtained on: innovative uses of technology, the quality of software available, accessibility of computers, equipment needs for special education, and assistance needed by teachers. Over two-thirds of teachers reported that they and their students typically had access only to video recording and playback equipment and older personal computers with limited software.

ERIC Clearinghouse on Disabilities and Gifted Education. (1995). Instructional design of computer-assisted instruction for use with students who have mild disabilities. TEACHING Exceptional Children, 27(3), 77-79. UMI.
This review of the literature on computer-assisted instruction for students with mild disabilities identifies features of effective software, offers examples of software features that support particular instructional strategies, and outlines findings on specific instructional principles as applied to computer-assisted instructional software.

Fitzgerald, G.E. (1994). Using the computer with students with emotional and behavioral disorders. Technology & Disability, 3(2), 87-99. (Theme issue: Special education) UMI.
This article describes promising practices for integrating the computer into therapeutic instruction for students with emotional and behavioral disorders. For students with behavior problems, the computer can serve as an effective motivator, provide opportunities for cooperative learning, offer social and leisure time pursuits, and provide students the tools to engage in self-monitoring activities. For students with emotional problems, the computer can facilitate self-expression, assist in determining effective learning strategies, and build self-esteem.

Flippo, K.F. (Ed) et al. (1995). Assistive technology: A resource for school, work, and community. Brookes Publishing Co., Box 10624, Baltimore, MD 21285-0624. 301pp.
This book explores the applications of assistive technology for individuals with disabilities in school, work, and community settings, stressing the need to keep the user of such technology as the focus of all design, training, and implementation processes. Issues addressed include: policy foundations, training, staff development, creative financing, community services, and the users' perspective of assistive technology.

Ford, M.J. et al. (1993). Attending behaviors of ADHD children in math and reading using various types of software. Journal of Computing in Childhood Education, 4(2), 183-96. UMI.
This article compared the effects of using various computer software programs on the attending behavior of children with attention deficit hyperactive disorder (ADHD). It found that the attention of ADHD children increased while they used software with a game format when animation was not excessive. Other factors affecting nonattending behaviors included the software's difficulty, format, and content.

Green, D.W. (1995). The benefits of multimedia computer software for students with disabilities. (ED382172) 21pp.
This paper assesses the current state of research and informed opinion on the benefits of multimedia computer software for students with disabilities. Topics include: a definition of multimedia; advantages of multimedia; Multiple Intelligence Theory, which states intellectual abilities consist of seven components; motivation and behavior modification; hyperactive children; attention grabbing and distraction; technology and metacognition; the value of interactivity, immediate feedback, and hypermedia; assessment-selecting software; students as producers; teacher skills, training, and support; and technology trends. A set of interview questions for practitioners is included and the interview sample and results are discussed.

Hanley, T.V. (1995). The need for technological advances in assessment related to national educational reform. Exceptional Children, 61(3), 222-229. UMI.
This article explores the relation between the inclusion movement and the development of national standards for "all students," and outlines their implications for technology-assisted improvements in assessment of students with disabilities. Testing accommodations, such as input/output adaptations, can be facilitated with technology, and new tools for measuring guiding student progress are being explored.

Higgins, K., & Boone, R. (1993). Technology as a tutor, tool, and agent for reading. Journal of Special Education Technology, 12(1) 28-37. UMI.
Reviews the use of computer-based technology in teaching reading to students with disabilities. Research from the last 10 years is examined using the metaphors of Tutor, Tool, and Agent as categories of instructional purpose. Most of the substantive data supporting computer use concerns drill and practice and tutorial assisted instruction.

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Holzberg, C.S. (1994). Technology in special education. Technology and Learning, 14(7) 18-21. UMI.
Presents examples of the use of technology to motivate, teach, and empower children with physical and cognitive disabilities. Specific applications include the use of computers for antivictimization training, writing, self-expression, and improving communication skills. work of Ctr. for Literacy and Disability Studies (North Carolina) is described.

Kurlychek, K. (1994). Software to go: A catalog of software available for loan. (ED378719) 223pp. EDRS.
This catalog lists the holdings of the Software to Go software lending library and clearinghouse for programs and agencies serving students who are deaf or hard of hearing. An introduction describes the clearinghouse and its collection of software, much of it commercial and copyrighted material, for Apple, Macintosh, and IBM (MS-DOS) computers and explains how to join the service and use the lending procedure.

Lindsey, J.D. (Ed). (1993). Computers for exceptional individuals. Second edition. Pro-ed, 8700 Shoal Creek Blvd., Austin, TX 78758-6897. 416pp.
This second edition provides an updated practical discussion of current computer technology for use with individuals with disabilities and/or gifted and talented individuals. Chapters include information on: general and specific computer concepts related to exceptional individuals; applications for computers with individuals with mild disabilities, speech and language disorders, severe and physical disabilities, sensory impairments, and gifted and talented individuals; and administrative and instructional applications. Appendices cover computer terms, theories, principles, languages; teacher competencies; specific software packages; and courseware evaluation procedures.

Ludy, R., & Blunt, M. (1995). Assistive technology resources: Building bridges for institutions for higher education. (ED380016). 17pp. EDRS.
Describes increased enrollment of individuals with disabilities in institutions of higher education and the special role of assistive technology resources making that possible and Technology-Related Assistance for Individuals with Disabilities Act (1988), which made discretionary funds available to all states to facilitate their development of consumer-responsive, statewide technology-related projects. Lists 53 state assistive technology projects is included.

Male, M. (1994). Technology for inclusion: Meeting the special needs of all students. Second edition. Allyn & Bacon, 160 Gould St., Needham Heights, MA 02194. 201pp.
This guide examines the implications of computer technology on the education of students with disabilities, focusing on the use of computers in inclusive classrooms. Chapters include information on: student access to technology; roles of teachers, parents, and administrators; quality-of-life issues; suggestions for selecting and integrating computer hardware; using computers to develop students' social skills; word processing and desktop publishing; applications such as database management, spreadsheets, telecommunications, and multimedia; integrating computer technology into individualized educational plans; and future trends in technology.

Meyers, L.F. (1994). Access and meaning: The keys to effective computer use by children with language disabilities. Journal of Special Education Technology, 12(3), 257-75. UMI.
Study of 18 school-age children with Down Syndrome supports contention that combining technological access to speech and text with methods providing the language structure to link speech output and text with personal meaning results in improved language skills compared to computers without speech output or use of pencil and paper.

Miller, E.C. (1993). Special experiences for exceptional students: Integrating virtual reality into special education classroom. (ED363321). 10pp. EDRS.
Discusses potential benefits and hazards that virtual reality holds for exceptional children in the special education system. Topics include: applications of virtual reality; developing academic skills via cyberspace; vocational training; and social learning in cyberspace; telepresence and distance education; the role of teacher in cyberspace; changing teacher-training programs; the corollary curricular change; and the risks of using virtual reality in special education.

Moore, P.R. (1994). An analysis of the impact of computer placement and training on special education teachers' attitudes and perceptions of the role of computers in instruction. Teacher Education and Special Education, 17(4), 236-48. UMI.
Results of placing a computer in eight special education classrooms and providing the teachers with a 4-month practicum of integrating the computer into instructional programs indicated that teachers viewed the computer as not only a powerful motivating and reinforcing tool but also as a generally useful tool for themselves and their students.

Ordover, E. (1994). Assistive technology for students with disabilities: Rights under federal law. (ED377624) 8pp. EDRS.
This paper defines "assistive technology device" and "assistive technology service," outlines responsibilities of states receiving IDEA funds to provide such devices and services, notes eligibility requirements, examines requirements for vocational education programs, considers the use of assistive technology devices and services to enable placement in regular education settings, and discusses the provision of auxiliary aids to students in postsecondary education programs. References to the United States Code, the Code of Federal Regulations, and court cases are provided to support the paper's views.

Payne, M.D., & Sachs, R. (1994). Educational software and adaptive technology for students with learning disabilities. (ED381920). 5p. EDRS.
Technological solutions are described that have enabled postsecondary students with learning disabilities to compete equally with nondisabled peers in the educational environment. Such solutions have included a variety of educational software, word processing applications, and adaptive technology. Selected examples are given of how campuses are providing computer access, which is mandated by the Americans with Disabilities Act (ADA) and Section 504 of the Rehabilitation Act of 1973.

Pesta, J. (1994). Assistive, adaptive, amazing technologies. TECHNOS, 3(2), 10-12. Agency for Instructional Technology (AIT), Box A, Bloomington, IN 47402-0120.
This article discusses assistive or adaptive technology and highlights major technologies that help physically impaired individuals at home, work, and school. Technologies include voice recognition, microswitches, communication boards, headsticks and mouthsticks, vision control, adaptive keyboards, word prediction software, electronic readers, speech synthesizers, Braille adapters, oversized displays, closed-captioning, and adapted computers.

Pisarchick, S.E. (1992). Technology. Project prepare: Competency-based personnel preparation in early childhood education modules. (ED353754). 743pp. EDRS.
One of nine competency-based training modules for personnel preparation in early childhood special education, this guide focuses on assistive technology and technological interventions in preschool programs. The module is adaptable for use with a general audience, direct service personnel, or administrators. This module focuses on six goals: gaining an overview of assistive technology and its curricular role; familiarity with switch applications to increase the independent control and participation of young children; understanding the basic use of computers and peripherals; understanding of how computers and peripherals can be integrated into the curriculum; gaining an overview of augmentative and alternative communication systems, and obtaining practical information regarding funding for assistive technology devices and services.

Staples, A. et al. (1993). Uses of technology and educational media in literacy instruction for children with developmental disabilities. (ED364845). 6pp. EDRS.
A 3-year research project, employing qualitative inquiry in a pair of preschool and primary grade classrooms (one self-contained and one integrated at each level), was undertaken to examine the literacy learning difficulties of school-aged children with developmental disabilities. The multi-site case studies of the first phase of the project used the constant comparative method of data collection and analysis. Analysis of the first year of the project reveals two primary themes: technology and inclusion. Technology facilitated literacy learning opportunities when: it was available; teachers were competent users and programmers of the devices; and teachers had ample time to adapt materials. Inclusion facilitated learning when: peers had a clear understanding of and experiences with their roles; and the individual needs of all students were considered.

Storeygard, J. (1993). Making computers work for students with special needs. TEACHING Exceptional Children, 26(1), 22-24. UMI.
A course on computers and writing for special education middle school students who are reluctant writers is described. The background of the course, the role of the computer, student attitudes, outcomes, and success factors are discussed. An added advantage was the improved communication between regular and special educators.

Wolfenden, D.P. (1995). Educators' commonly asked questions about assistive technology devices and services. (ED393240). 33pp. EDRS.
This monograph for Maine educators presents basic information on assistive technology devices and services and the role of assistive technology in delivering appropriate education to children with disabilities in the least restrictive environment. Questions address definitions; relevant provisions of the Individuals with Disabilities Education Act (IDEA); funding sources; alternatives to purchasing assistive technology devices; responsibilities of schools regarding device maintenance, repair, and replacement; relationship of devices to medical needs; evaluation of devices or services; and training in use of such devices.

Zabala, J. (1995). The SETT framework: Critical areas to consider when making informed assistive technology decisions. (ED381962). 4pp. EDRS.
This brief paper offers a systematic approach to making decisions regarding the provision of assistive technology devices and services for students with disabilities. Initial questions address which students need assistive technology, what kind of technology is needed, and who is involved in making these decisions. The question about what sort of data should be collected is answered by a proposed model, the SETT framework, which raises a series of 16 questions about the Student, the Environment, the Tasks, and the Tools. A form for collecting SETT information is attached.

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MATERIALS FROM FEDERALLY FUNDED RESEARCH PROJECTS:

Activating children through technology. A final report for the project period October 1, 1992-January 31, 1996. (ED395411). 40pp. EDRS.

The primary purpose of ACTT (Activating Children Through Technology) Outreach, housed in Macomb Projects in the College of Education and Human Services at Western Illinois University, is to integrate assistive technology into early childhood services for children, ages birth to eight, with disabilities.

NCIP profiles, 1-5, 1995 (ED390230); NCIP profiles, 1-5, 1994 (ED390229); Evaluation of the integration of technology for instructing handicapped children (middle school level).

Final report of phase I (ED342159); Evaluation of the integration of technology for instructing handicapped children (middle school level). Final report of phase II (ED342160). EDRS. The National Center to Improve Practice (NCIP) is a 5-year project whose overall mission is to promote the effective use of technology, media, and materials to improve educational outcomes for students with disabilities.

Opening the doors: Using technology to improve education for students with disabilities. (ED357550). EDRS.

This federally sponsored project conducted by Macro International, Inc. explored educational practices, originating in diverse communities, in which teachers used educational technology in innovative ways to meet the needs of children with disabilities.

Research synthesis on design of effective media, materials, and technology for deaf and hard-of hearing students. Technical report no. 1 (ED386850); Research synthesis on design of effective media, materials, and technology for deaf and hard-of hearing students. Executive summary. Technical report no. 2 (ED386851); Research synthesis on quality and availability of assistive technology devices. Technical report no. 7. (ED386855); Research synthesis on quality and availability of assistive technology devices. Executive summary. Technical report no. 8 (ED386856); Research Synthesis on Early Intervention Practices. Technical report no. 11 (ED386859); Technology integration into early childhood curricula: where we've been, where we are, where we should go (ED386901). EDRS.

The National Center to Improve the Tools of Educators was established to help developers and publishers of technology (software), media (electronic media), and materials (print) meet emerging classroom needs of diverse learners and provide guidelines to enable developers and publishers to produce the most relevant and effective materials possible.

School reform and its implications for technology use in the future. Identifying emerging issues and trends in technology for special education. (ED350763). EDRS.

This 3-year study conducted by COSMOS Corporation strived to identify emerging issues and trends in technology for special education.

Technology in the classroom: Applications and strategies for the education of children with severe disabilities: Communication module; Education module; Listening and hearing (Supplement); Positioning, access, and mobility module. Available from: Fullfillment Operations, American Speech-Language-Hearing Association (ASHA), 1081 Rockville Pike, Rockville, MD 20852 (800-638-8255).

The "Technology in the Classroom" project developed, field tested, and evaluated the effectiveness of self-instructional materials that would improve the technology skills and knowledge of families and regular/special education professionals, in order to integrate assistive technologies into the educational programs of children (ages 2 to 7) with severe disabilities.

Technology inservice project (Project TIP). Final report. (ED385991). EDRS.

Technology Inservice Project (Project TIP) was designed to provide technology training and information to meet the staff development needs of early childhood administrators, teachers, and support personnel and early intervention team members, including families and regular educators.

IV. Ongoing Learning: In Situ and Distance Learning

A. Preservice
B. Continuing Education
C. Consultation

THE VIRTUAL CAMPUS: TECHNOLOGY AND REFORM IN HIGHER EDUCATION

Author: Gerald C. Van Dusen,

(an excerpt)

The virtual campus is a metaphor for the electronic teaching, learning, and research environment created by the convergence of powerful new information and instructional technologies. Today there is a pressing call for technology to provide expanded higher education opportunities to a very wide spectrum of present and potential clientele.

WHAT ARE THE IMPLICATIONS OF TEACHING ON THE VIRTUAL CAMPUS?

A paradigmatic shift, from a professor-centered to a student-centered system of learning, has particular implications for the profession of teaching. One implication is a recommitment to creating an ideal learning environment for students, employing new technologies to address variances from the ideal. A second major implication for faculty is a shift from traditional to new roles and classroom responsibilities. The transition from lecturer to facilitator will not happen overnight and must be accompanied by institutional and professional commitment to incorporate research findings into professional development activities. Beyond merely providing technical training in the latest (and soon obsolete) technology, professional development activities will need to focus on crucial classroom variables that will ultimately determine the level of productive interaction and intellectual engagement apropos to the individual and group. (Barr and Tagg 1995)...

http://www.ed.gov/databases/ERIC_Digests/ed412815.html

ERIC Clearinghouse on Higher Education, Washington, DC.; George Washington Univ., Washington, DC. Graduate School of Education and Human Development.

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IV. Ongoing Learning: In Situ and Distance Learning

A. Preservice

Using Cutting Edge Technology to Prepare Teachers to Work with Children and Youth Who Have Emotional/Behavioral Disorders.

by S.M. Martin & W.D. Wienke (1998). *Education and Treatment of Children, 21,* 385-395.

Describes an intense one year graduate program that uses video disc/computer technology for general education teachers who are preparing to work with children and youth with emotional and behavioral disorders. The technology uses video laser discs and computer programming to allow graduate students to view video segments of many different settings where students with emotional and behavioral disorders are interacting with other students. Opportunities to attend meetings, meet with other school and parent team members, review student records, and hear expert opinions on the students' situations are also available through the technology.

Engaging Preservice Teachers in Hypermedia Authoring: Process and Outcomes

by G. Fitzgerald & C. Hollingsead (1997). *Journal of Educational Research, 16,* 191-207.

Presents the methods and outcomes of a semester-long course in hypermedia authoring and instructional strategies for preservice teachers. Post test findings revealed that participants showed a decrease in computer anxiety through their involvement in the course. The study revealed that with new and easy programs, once taught, teachers were ready and willing to use the software that would help them create instructional materials.

IV. Ongoing Learning: In Situ and Distance Learning

B. Continuing Education

Low-Cost Professional Training through Audio Teleconferences

by M. Lerro & J. Hylton (1992). *International Conference on AIDS, 8,* 210-216.

The objectives of these conferences are to train a specialized national audience of mental retardation professionals on HIV prevention. Methods: Two 90-minute national audio Teleconferences were offered to mental retardation professionals in the USA in 1991. All costs were paid by the ARC with funding from the Centers for Disease Control. Self-selected participants gathered in local social service agencies to receive training, talk with national presenters, and preview materials. This training targeted a specialized audience in a geographically large area. The ARC used only basic telephone technology. Results: The Teleconferences were May 29 and August 29, 1991. Twenty-six agencies hosted the first Teleconferences, 52 hosted the second. Responses by 81% and 71% (respectively) indicate a minimum attendance of 275 and 503 mental retardation professionals. A minimum of 773 people attended the Teleconferences training sessions. The cost per participant trained during the 90-minute programs was $4.80. Conclusion: Audio Teleconferences can reach specialized audiences across large geographical areas at relatively low costs.

Using the Internet for Clinical Training: A Course on Network Therapy for Substance Abuse

by M. Galanter, D. S. Keller, & H. Dermatis (1997). *Psychiatric Services, 48,* 999-1008.

The value of the Internet as a continuing education tool is illustrated in a teaching, module prepared at New York University Medical Center, which is designed to enhance skills in the treatment of alcoholism. This module can be adapted to an interactive format, allowing for exchanges among students and faculty. See -- http://www.med.nyu.edu/substanceabuse/course

Problem-Based Learning in Distance Education: A First Exploration in Continuing Medical Education

by C.E. Engel, E. Browne, P. Nyarango, S. Akor, A. Khwaja, A. A. Karim, & A. Towle (1992). Medical Education, 26, 389-401.

"The Wellcome Tropical Institute has assisted countries in the tropics to establish viable systems of continuing medical education, particularly for young doctors practicing in rural areas. As part of this strategy the Institute has developed material for use in distance learning. The first attempt to apply the problem-based learning approach to written material for use by an individual learner in the absence of a tutor led to a trial in Ghana, Kenya and Pakistan to compare a conventionally designed module on the same topic for their respective acceptability, effectiveness and efficiency. The design, implementation and results of these three comparative trials are presented..."

Interactive Case Studies in Behavioral Disorders: Looking at Children from Multiple Perspectives

by L. Semrau & G. Fitzgerald (1995). *Education and Treatment of Children, 18,* 349-359.

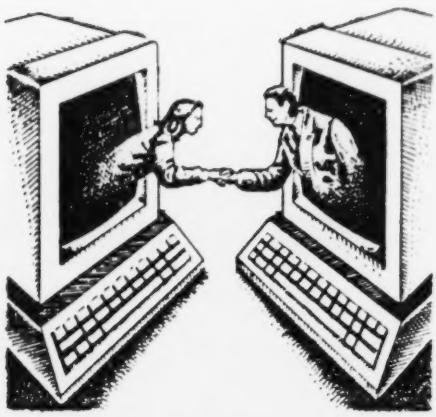
The rationale and interactive multimedia program for training personnel to work with children with emotional and behavioral disorders is described. Program I, Perspectives on Emotional and Behavioral Disorders, for special and general education as well as related services personnel is designed for preservice and inservice use. National experts describe various approaches and case study vignettes provide materials for both student and instructor use. When complete, the series will include three additional packages covering assessment and planning, instruction and management, and systematic observation. All operate on either a Macintosh or Windows platform. A videodisc, computer software, and an instructor's manual are provided for each of the programs.

Psychiatric Times -- CME Credit (Continuing Medical Education)
A list of articles with a secure on-line form that allows Category 1 credit via the Internet.
website: http://www.mhsource.com/pt/cme/html E-mail: posttest@mhsource.com

Paraeducators -- **http://www.lausd.k12.ca.us/lausd/offices/personnel/cert/main.html**
An on-line Career Ladder Program established in September 1994 as a joint project of the Los Angeles Unified School District and Service Employees International Union, Local 99 to support paraeducators and pursuing careers as teachers, and to guide them toward shortage fields by providing Career Information and Counseling, Educational Advisement, Financial Assistance, Support Group, and Test Preparation.

Professional Development -- **http://instech.tusd.k12.az.us/PDindex.html**
An on-line Professional Development Services provided by the Tucson U.S.D.

Professional Growth -- **http://www.co.henrico.va.us/schools/ProGro.html**
An on-line and downloadable set of Professional Growth Plans (3) developed by the Henrico County Public Schools that allow the superintendent to the custodial staff to participate in setting and trying to reach professional goals each year.



IV. Ongoing Learning: In Situ and Distance Learning

C. Consultation

Telemedicine applications in an integrated mental health service based at a teaching hospital
by P. Yellowlees & C. Kennedy (1996). *Journal of Telemedicine and Telecare, 2,* 205-209.
Psychiatric applications have predominated in Australian telemedicine in recent years. This paper describes development of the first telemedicine system for an integrated mental health service based at a teaching hospital. Within about six weeks of the system being installed, over 80% of all clinical administrative staff, from all the mental health disciplines of the integrated service, had completed a formal training program. Applications within the service included direct clinical work and the use of video-conferencing in preference to standard telephone over short distances. Applications external to the service, over distances of thousands of kilometers, included clinical supervision and teaching. Evaluation is continuing.

Telepsychiatry: Application of Telemedicine to Psychiatry.
by L. Baer, P. Cukor, & J. Coyle (1997) in R. Bashshur, J. H. Sanders, & G. W. Shannon (Eds.). *Telemedicine: Theory and Practice.* Charles C. Thomas: Springfield, IL. pp. 265-288.
Discusses the current situation and problems in mental health care delivery that prompt psychiatry's continued interest in telepsychiatry. It examines the rationale for the use of telecommunications in psychiatry and describes some projects. It also speculates about the future of Telepsychiatry, and an appendix discusses the specific role of telephone technology in the provision of psychiatric care.

Improving Client Outcomes: The Kansas Technical Assistance Consultation Project
by W. P. Sullivan & C. A. Rapp (1991). *Community Mental Health Journal, 27,* 327-336.
A central problem in the design and implementation of MH services is how to transfer relevant information to the active practitioner. Traditional methods of knowledge transfer, such as professional journals and workshops, appear to have uneven results at best. Outreach services, here described as technical assistance, hold promise for transferring relevant knowledge to improve professional practice. This report describes the technical assistance consultation project jointly sponsored by the University of Kansas, School of Social Welfare and the Kansas State Department of Mental Health and Retardation. A case example is provided.

Medicare Program; Payment for Teleconsultations in Rural Health Professional Shortage Areas
From: Department of Health and Human Services, Health Care Financing Administration (HCFA), HHS. 42 CFR Parts 410 and 414. *Federal Register*: June 22, 1998 (Vol. 63, No. 119)[Proposed Rules] [Page 33882-33890] From the Federal Register Online via GPO Access [wais.access.gpo.gov]
This proposed rule focused on implementing parts of section 4206 of the Balanced Budget Act of 1997 by amending regulations to provide for payment for professional consultation by a physician and certain other practitioners via interactive telecommunication systems.

Challenges of Teaching Graduate Psychiatric-Mental Health Nursing with Distance Education Technologies
by M. L. Lewis, & M. J. Kaas (1998). *Archives of Psychiatric Nursing, 12,* 227-233.
Faculty are attempting to meet the needs of students at distant sites through telecommunications, such as interactive television, audio, and audio/video telephone conferencing, facsimile, and electronic mail. Article discusses challenges related to connectedness, confidentiality, and communication; describes approaches to address these challenges; and identifies student, faculty, and environmental attributes that help make teaching with this technology successful.

Bridging the East and West with a Sheep Cart
by L. Milburn (Sept/Oct, 1999). *Health Center Management,* p. 24
Describes new technology in video conferencing. A new portable satellite program enables a connection to be made and is especially valuable for use overseas.

Additional Resources Related to Distance Learning

Distance Learning Resources for Public Health Professionals. (1999) -- www.phf.org. Public Health Foundation, 1220 L St, NW, Suite 350, Washington, DC 20005. 877/252-1200.

Catalog of books, slides, videotapes for a wide range of topics including Health Promotion, Viruses, and Environmental health.

Technology in Higher Education Opportunities and Threats.
S. Gallick (February 1998). *UCLA Faculty Association Newsletter*. P.O. Box 33336, Granada Hills, CA 91394-3336. Phone & Fax (818)341-8664. E-mail: ucfa@pacbell.net http://home.pacbell.net/ucfa/cyberednewsl.html

Addresses the many issues in using technology in higher education, such as accreditation of online courses, copyright issues, and politics and technology.

Student Progress in Distance Education Courses: A Replication Study.
D. Kember, T. Lai, D. Murphy, I. Siaw,& K.S.Yuen (1994). *Adult Education Quarterly, 45*, 286-301.

Describes a replication study of a model of student persistence in distance education. The essence of the model is that social and academic integration of students are viewed as intervening variables between initial background characteristics and outcome measures (i.e., academic achievement and persistence). The studies in this article reveal the importance of social and academic integration to students progress in distance education.

Restructuring Schools with Technology: Challenges and Strategies.
B. Means, & K. Olson (November 1995). SRI International. SRI Consulting, 333 Ravenswood Avenue, Menlo Park, CA 94025; phone: 1 650 859 4600; fax: 1 650 859 4544; E-mail: info@future.sri.com; http://future.sri.com/bip/datalog/DL239.html

SRI's Study of Technology and Education Reform included case studies of nine sites where technology has been used as a strategy for forwarding an education reform agenda. This report is based on the observations, interviews, and document analyses for the nine case study sites.

Teleteaching Distance Education. Final Report.
By Epler Enterprises, Inc., Hummelstown, PA. Mansfield University, PA. Rural Services Inst. Center for Rural Pennsylvania, Harrisburg. Feb. 1993. 481 p., 6 fiche. ERIC microfiche collection, ED373947. ERIC Clearinghouse number: RC019758.

Investigated the need for distance learning in Pennsylvania's rural schools, examined types of distance learning programs and technology currently being used, and identified factors that could enhance or inhibit the use of distance learning in rural schools.

Teleteaching Distance Education. Issues for Rural Revitalization Series, Vol 2, N. 1. Center for Rural Pennsylvania, Harrisburg. Jan. 1994. 35 p., 1 fiche. ERIC microfiche collection, ED373946. ERIC Clearinghouse number: RC019757.

Report providing Pennsylvania state legislators and educators with policy-relevant information about the distance learning needs of rural Pennsylvania school districts. Two surveys, covering rural and urban-suburban Pennsylvania school districts, examined distance learning programs and technologies currently being used and the possibility of creating rural-urban distance learning partnerships.

Education and Information Technologies -- http://www.wkap.nl/journalhome.htm/1360-2357. Official Journal of the IFIP Technical Committee on Education. Contact: Kluwer Order Dept. P.O. Box 358, Accord Station, Hingham, MA 02018-0358. (781)871-6600 / fax: (781)681-9045. E-mail: kluwer@wkap.com

Educational Program for Gifted Youth
At Stanford -- offers remote courses for Gifted Students. Ph: 800/372-3749 or 650/329-9920; or fax (650) 329-9924. Web: http://www-epgy.stanford.edu/epgy/index.html

Duke's Learn on Your Own
Offers academically talented students an opportunity to take accelerated courses in their hometowns throughout the year. Contact: Ph: 919/684-3847; mail: Duke TIP, Learn on Your Own, PO Box 90747, Durham, NC 27708-0747

Johns Hopkins, Institute for Academic Advancement of Youth, Center for Distance Learning -- http://www.jhu.edu/gifted/cde/
Offers Math and Writing programs by CD-Rom, talent searches, summer programs, and other distance learning programs. Conact: Distance Learning Project partnership EPGY and CTY, East Coast phone: 410/516-0337; West Coast phone: 310/754-4100; fax: 410/516-0587 Mail: Institute for the Academic Advancement of Youth, Johns Hopkins University, 3400 N Charles St., Baltimore, MD 21218

Northwestern University Center for Talent Development -- http://www.ctd.nwu.edu/
Offers research info and programs, including Letter Links Learning, correspondence courses for academically talented students grade 6 to 12. Letter Links Program info available by WWW, as is their Centerpoint magazine. Contact: Center for Talent Development, School of Education and Social Policy, Northwestern University, 617 Dartmouth Pl., Evanston, ILL 60208-4175; Ph: 847/491-3782 / Fax: 847/467-4283 E-mail: ctd@nwu.edu

UCLA Extension -- http://www.OnlineLearning.net/
On-line courses offer distance learning courses in business management, organizational behavior, risk management, accounting, screen writing, fiction writing, test preparation and teacher certification. At-home study courses can be completed on-line or through employers and an affiliated Internet training and distance education network. Write: 555 South Flower St., Suite 2850, Los Angeles, CA 90071 ph: 800/784-8436; fax: 213/689-4657

VA Satellite Education Network -- http://www.pen.k12.va.us/go/VDOE/Technology/VSEN
Offers televised foreign language and AP classes. Currently enrolling students from 20 states and expanding their services. Contact: Program Administrator,Virginia Department of Education, P.O. Box 2120, Richmond, Virginia 23218-2120 Ph: 804/692-0335 fax: 804/225-4514

The Distance Learning Resource Network (DLRN) -- http://www.wested.org/tie/dlrn/
National listing of distance learning programs with a searchable catalog of over 14,000 programs. Located at WestEd. A dissemination project for the U.S. Department of Education Star Schools Program. Contact: 800/662-4160; 730 Harrison St., San Francisco, CA 94107

A Few Others

The Digital Education Network -- http://www.actden.com/ E-mail: ewang@act360.com
Canadian-based project offering online courses for students in grades 7 through 12.

New Brunswick Canada tele-education site -- http://tenb.mta.ca/
Describes distance education available. Also an interesting web site.

Los Angeles County Office of Education TEAMSnet. -- http://teams.lacoe.edu/
TEAMSnet is an instructional service of Los Angeles County Office of Education's TEAMS Distance Learning Project. This is a federally funded Stars Schools project and offers live, interactive distance learning programs via satellite, cable, ITFS, or PBS television in math, science, history, social sciences, english, and language arts.

University of Washington distance learning. Ph: 206/543-2350; 800/543-2320
E-mail: instudy@u.washington.edu

Center for Research on Learning and Technology -- http://crlt.indiana.edu/
From Indiana University, School of Education. Supports research on and evaluation of interactive distance learning environments that inform understandingof student learning. CRLT, 201 North Rose Ave., Bloomington, IN 47405-1006 Ph: 812/856-8790; Fax: 812/856-8440; E-mail: celt@indiana.edu

Distance Learning Catalog --
http://uu-gna.mit.edu:8001/uu-gna/documents/catalog/index.html
E-mail: catalog@gnacademy.org

CASO Internet University -- http://www.caso.com/home/home.phtml
Listing of 700+ courses available online.

California Distance Learning Project (CDLP) -- http://www.otan.dni.us/cdlp/cdlp.html
Cooperative effort with the San Francisco Bureau of CNN.

Mind Extension University -- cable and video classes. Ph: 800/777-6463

National Consortium for Secondary Schools Specializing in Mathematics, Science and Technology Contact: 1429 Senate St., 802 Rutledge Bldg, Columbia, SC 29201
Ph: 803/734-8385

City University (Bellevue, WA) -- http://www.otan.dni.us/cdlp/cdlp.html
Provides on-line courses.

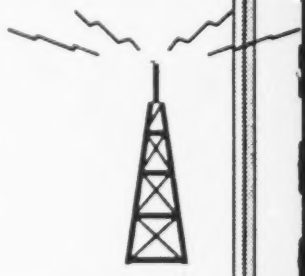
Nebraska Independent Study High School -- Nebraska Center for Continuing Education, 33rd & Holdrege Streets, Lincoln, NE 68583-0900 Ph: 402/472-2175

USING OUR CENTER FOR DISTANCE LEARNING

Among the many resources for continuing learning from our Center are:

- *our website* -- http://smhp.psych.ucla.edu -- where you will find a continuing education section and wealth of downloadable materials, access to our consultation cadre, links to other key sites and access to our catalogue of internet sites relevant to mental health in schools, etc. You can also find and/or ask for technical assistance

- *our monthly electronic newsletter (ENEWS)* -- which can be subscribed to by sending an e-mail request to -- listserv@listserv.ucla.edu (Leave the subject line blank, and in the body of the message type: subscribe mentalhealth-L)



V. Additional References to Books, Chapters, Articles, Reports, & Other Printed Resources

Information Systems to Support Comprehensive Human Services Delivery: Emerging Approaches, Issues, and Opportunities (Report, 1994)
By C. Marzke, D. Both, and J. Focht
This report involves a nationwide study of the current status information technology in the context of comprehensive service delivery. The study focuses on information systems initiatives developed to support efforts to reform the service delivery system, rather than on those efforts that relate to automation of existing single service systems. The study reveals that efforts to apply information technology to meet the needs of comprehensive services delivery are relatively scarce, and most projects are still in the early stages of development. Contact: National Center for Service Integration (515) 280-9027 / Fax: 244-8997

DSM-IV Internet Companion (1998)
By Robert F. Stamps, & Robert M. Morrison
This book is a compilation of 1,500 Internet sites, organized by DSM-IV categories, offering info on mental disorders. Sites include psychology, psychiatry, search engines, sites. (Published by W.W. Norton.)

Insiders Guide to Mental Health: Resources Online (1999) (The Clinician's Toolbox)
By John M. Grohol, & Edward L. Zuckerman (Published by Guilford Press.)
Presents web resources on psychiatry, psychology, and related areas such as self-help and patient education. Provides reviews on Internet resources, including search engines, news groups, databases and on where to go for various information relating to mental health. Also includes sites with job listings, latest treatments, and an appendix on researching grants online.

The Essential Internet: A Guide for Psychotherapists and Other Mental Health Professionals (1997) (Developments in Clinical Psychiatry).
By L. Anthony, M.D. Labruzza. (Jason Aronson Publisher)
A guide to Internet use ranging from getting connected, modems, viruses, history, E-mail, mail-lists, news groups, traditional tools - gopher, FTP, www, and a directory of useful sites

Rising to the Challenge (1995)
The report covers various aspects of education. It also includes a time line for changes during the period of 1995-2002. Topics include the need for expansion of technological capacity, technology in general, policy issues related to education, systematic concerns, and resources for education and training for school staff. Contact: Education Commission of the States, 707 17th Street, Suite 2700, Denver, CO 80202-3427

Restructuring Schools with Technology: Challenges and Strategies.
By B. Means, & K. Olson (November 1995). SRI International. SRI Consulting, 333 Ravenswood Avenue, Menlo Park, CA 94025; phone: 1 650 859 4600; fax: 1 650 859 4544; E-mail: info@future.sri.com; http://future.sri.com/bip/datalog/DL239.html
SRI's Study of Technology and Education Reform included case studies of nine sites where technology has been used as a strategy for forwarding an education reform agenda. This report is based on the observations, interviews, and document analyses for the nine case study sites.

Getting America's Students Ready for the 21st Century: Meeting the Technology Literacy Challenge (1996)
By U.S. Department of Education -- www.ed.gov (800) USA-LEARN
Includes information on technological literacy, the challenges, the goals, the investments that are needed, and how to get involved. Benefits of a technological advancement include: enhanced student achievement better assessment of student progress, increased family involvement, improved teachers skills, and improved school administration and management. Report indicates how goals will be met and what will make them successful.

Internet use by teachers: Conditions of professional use and teacher-directed student use. ***Teaching, Learning, & Computing: 1998 National Survey, Report #1.***
By H. Becker Center for Research on Information Technology and Organizations.
This document reviews data from a study that examined the extent to which teachers and students use the Internet, applications of the Internet in the classroom setting, and the degree perceived value of Internet use in the classroom. The full document can be downloaded from http://www.crito.uci.edu/TLC/findings/Internet-Use/startpage.htm

Critical issues in the design and implementation of telementoring environments. (1998).
By D. Bennett, N. Hupert, K. Tsikalas, T. Meade, & M. Honey, Center for Children and Technology Reports.
Discusses issues and challenges that arise in designing and supporting online mentoring environments which focus on building relationships among people who never meet face-to-face. Based on findings from the implementation phase of the project, key features of program design and critical issues that emerged with teachers, students, and mentors are discussed.
available at: http://www2.edc.org/CCT/cctweb/public/include/pdf/09_1998.pdf

Information Technology and Human Services
By Robert Hughes, Eunjee Joo, Shannon Zentall, & Kerrie Ulishney
Provides information on computers available in the workplace, reviews current needs, and discusses the potential uses of information technology.
Available at http://www.hec.ohio-state.edu/famlife/bulletin/volume5/bull51.pdf

Distance learning evaluation: Final report 1994-1995. New York City, NY. (1996).
By Grimaldi, C., Hawkins, J., Dyer, P., Moeller, B., Thompson, J., Baker, T., & Weikert, L. Center for Children and Technology Reports.
This document describes an evaluation of a distance learning program implemented in New York. The study examines variables such as attitudes, performance, and frequency and type of interaction. Recommendations follow. Information about the instruments and measurement tools are provided in the Appendix.
Available at http://www2.edc.org/CCT/cctweb/public/include/pdf/11_1996.pdf

Microtraining and Multicultural Development
Newsletter provides access to videos and books geared towards counselor and therapist education and multicultural competency development. These educational materials target a variety of issues that therapists or counselors often encounter. PO Box 9641, North Amherst, MA 01059-9641

Creating board policies for student use of the internet. (1995).
By J. McKenzie. *From Now On: The Educational Technology Journal, 5.*
Provides some guidelines to help schools or districts develop policies regarding student use of the internet. Some case examples are provided to help with the discussion of student use.
Available at http://www.fno.org/fnomay95.html

Reviewing Family Life Web Sites
By R. Hughes and K. Whaley
Provides information on several dimensions that can help to judge the quality of websites dedicated to child and family issues. The document can be downloaded from http://www.hec.ohio-state.edu/famlife/bulletin/volume5/bull51.pdf

Learning Disabilities –
http://www.ldonline.org/ld_indepth/technology/opening_the_door_luke.hlml
This document from the Office of Special Education Programs at the US Department of Education provides a guide and video with information about technology tools that research suggests are effective with students with learning disabilities

VI. Model Programs and Guides

A. Telemedicine / Telehealth

B. Psychiatry/Psychology

C. Education

D. Guides

VI. Model Programs and Guides

A. Telemedicine / Telehealth

Telemedicine Report to Congress

Telemedicine, in one form or another, has been practiced over thirty years. Today, telemedicine applications employ advanced image as well as audio capabilities. These technologies can range from high resolution still images to sophisticated interactive teleconferencing systems. Telemedicine can improve the delivery of health care in America by bringing a wider range of services, including mental health, to communities and individuals in underserved urban and rural areas. In remote rural areas, where the distance between a patient and a health professional can be hundreds of miles, telemedicine can mean access to health care where little had been available before. In emergency cases, the access can mean the difference between life and death. In particular, in those cases where fast response time and speciality care are needed, telemedicine availability can be critical. In addition, telemedicine can also help attract and retain health professionals in rural areas by providing ongoing training and collaboration with other health professionals.

2 reports available: http://ntiant1.ntia.doc.gov/reports/telemed/cover.htm
http://www.hcfa.gov/pubforms/telemed.htm

***Telemedicine Information Exchange: 1998 Report on U.S. Telemedicne* Activity**

Grigsby B, and Brown NA (1998) Report on U.S. Telemedicine Activity. Association of Telemedicine Service Providers, Portland, OR: 106p

The results of the second annual survey of over 140 Telemedicine programs in the U.S. with data from 1997 and the first quarter of 1998. Telemedicine Today magazine also sponsored the report, which found that Telemedicine is growing and diversifying. Forty-six states reported Telemedicine activity, with California, New York, Texas, North Carolina and Minnesota leading the way in terms of numbers of programs and consultation. Prison activity is increasing also, as is home health. The report also identifies some new applications of Telemedicine, including one in South Carolina providing mental health services to a deaf population, and one in Florida providing health care to homeless children. The report surveyed a variety of program aspects including specialities, telecommunications, funding, equipment, vendors, barriers, and future goals.

Contact: The report is available from the ATSP at http://www.atsp.org/survey/ or e-mail info@atsp.org or call (503)222-2406.

Association of Telemedicine Service Providers http://www.atsp.org/

The Association of Telemedicine Service Providers (ATSP) is an international membership-based organization dedicated to improving health care through growth of the telehealth industry. It strengthens its members and the business of Telemedicine through legislative advocacy, educational programs, and business support services. By anticipating industry and market demands, the ATSP expands opportunities for service providers, health care options for patients, and the development of high-quality equipment and telecommunications services.

Telehealth -- http://telehealth.net/

TelehealthNet is a networking site for organizations, associations, professionals and vendors. It is for sharing resources and partnering in developing telehealthcare solutions to health care problems.

National Information Center on Health Services Research and Health Care Technology (NICHSR) Information and Data Sources for Health Care Technology Assessment (HCTA):

Discusses Health Care Technology Assessment and processes for assembling evidence -- the data literature and other information -- relevant to particular assessment. Available information sources cover different, though often overlapping, sectors of health care information. The variety of types of sources that may be useful for HCTA include: computer databases of published literature; computer databases of clinical and administrative data; printed indexes and directories; government reports and monographs; reference lists in available studies, reviews and meta-analyses; special inventories/registers of reports; health newsletters and newspapers; company reports and press releases; World Wide Web sites; colleagues and other investigators.

Contact: http://www.nlm.nih.gov/nichsr/ta101/ta10105.htm

Association of Telemedicine Service Providers (ATSP) -- http://www.atsp.org/

An international membership-based organization dedicated to improving health care through growth of the telehealth industry. It strengthens its members and the business of telemedicine through legislative advocacy, educational programs, and business support services. By anticipating industry and market demands, the ATSP expands opportunities for service providers, health care options for patients, and the development of high-quality equipment and telecommunications services.

Totally Automated Telehealth Systems to Deliver Health Behavior Change Interventions

by Robert Friedman, M.D.: http://telehealth.net/articles/integrating.html

The combinations of modern distance technologies (such as radio) can, by generating public interest and informing people about mental health issues, be part of the care continuum by playing a major role in making psychology more accessible to the public.

AMA: Adolescent Health On-line -- http://www.ama-assn.org/adolhlth

Use AHOL to find information on a specific adolescent health issue; find additional on-line sources for adolescent information; ordering adolescent health materials; resources available to help select a physician; training available for professionals to deliver clinical preventive services to adolescents.

Telehealth Psychotherapy: Promise and Concerns

Excerpted from article entitled: Study *probes how patients are affected by telehealth*•

Psychotherapy delivered by an audio-video link or speaker phone appears to be just as effective as face-to-face therapy, according to early data on one of the first controlled studies on the use of behavioral telehealth. "Even though these findings are suggestive, they provide initial evidence questioning the notion that telecommunication-mediated therapy has a negative effect on the relationship between clients and counselors," says Robert Glueckauf, PhD, an associate professor at Indiana University Purdue University Indianapolis. Preliminary results also show that the bond between the client and practitioner is unaffected by the delivery system.

Glueckauf will have an opportunity to corroborate his initial results this summer when the three-year study will move to the University of Florida in Gainesville, where Glueckauf will direct the new Center for Research on Telehealth and Health care Communications—the first psychology-based telehealth center. It is being partially funded by the Arthur Vining Davis Foundation and the Columbia Health care Corporation.

Since telehealth has been gaining popularity in rural areas, many practitioners have been calling for more clinical research on telehealth's effectiveness. Studies like this are necessary to determine how telecommunications can affect the delivery of health care, says Russ Newman, PhD, JD, APA's executive director for practice.

"The real issue is how do we know that the method of delivering services doesn't end up influencing, in a negative way, the services that are being delivered," Newman says. "That's what happened with managed care and cost-containment strategies, if you look at it as a technology that was intended to help deliver services more cost-effectively. Now it is driving the health-care service rather than simply delivering the health-care service and negatively affecting the service."

"We would want to make sure the same thing wouldn't happen when telecommunication technologies are used to deliver services."

•Author: L. Rabasca (1998). In the *Monitor, Vol 29*, No.8. The newsletter of the American Psychological Association. Available at http://www.apa.org/monitor/aug98/tele.html

Practice Directorate: Telehealth Poses Opportunities and Challenges for Psychology
by D. Nickelson (1997). *Practitioner Focus, Public Relations and Communications.*
The health care marketplace continues to evolve, presenting an ever-widening range of professional practice challenges and opportunities. One example is the increasing use of advanced computing and communication technologies by health systems to track patients, analyze data and support clinical service delivery. To ensure that psychology remains on the cutting edge of such technological developments, APA governance and the Practice Directorate recently began examining the potential impact of the rapidly evolving fields of 'telehealth' and 'behavioral telehealth' on psychology practice. Telehealth and behavioral telehealth involve the use of telecommunications and information technology to provide access to health assessment, diagnosis, intervention, consultation, supervision, education and information across distance. This includes e-mail and Internet searches via desktop computer as well as real-time, full-color video and stereo audio teleconferencing hookup via mobile satellite downlinks. For more information: Pracpr@apa.org

Clinical Applications of Telehealth
by B. Hudnall Stamm (1998). *Mental Health Care, 29*, 536-542
Article introduces the concept of telehealth and examines how telehealth expands both provider and patient access to health care. Current clinical applications are presented including equipment, research, and examples of direct clinical care. The article focuses on store-and-forward and video teleconferencing technologies providing information about the equipment and research pertaining to the clinical use of the equipment. The status of behavioral telehealth programs in the United States is reviewed and two case examples are provided. The first example discusses a direct patient care system and the second a remote clinical supervision system. The article concludes with suggestions for determining the value of adding telehealth to existing clinical practices.

E-mail as a Modality for Crisis Intervention
by J. Polauf Telehealth Net, http://telehealth.net/articles/email.html
Suggests that the success of both e-mail and crisis intervention brief therapy are due to similiar motivations: a need for rapid response, very low cost, easy accessibility, and effectiveness towards modest goals. When combined together, *e-mail based crisis intervention* is seen as an important tool for mental health practitioners. Suggests that the theory and technique of crisis intervention does not require extensive modifications if conducted through a series of e-mail communications between therapist and client. It is important not to confuse crisis intervention with trauma services, however, as trauma services usually require hospital settings or immediate referral-response hotlines. Crisis intervention is time limited counseling that is structured into distinct stages, with concrete goals and problem solving exercises, and the overall mission is to return the individual to pre-crisis, stabilized behavior. *E-mail based crisis intervention* is a practical and efficient innovation that can bring mental health interventions to the homes of millions of people today.

Telemedicine Funding Database: Research On Mental Health Disorders in Rural Populations
The program announcement for research on Mental Health Disorders in Rural populations is available through NIMH automated fax retrieval system. From a fax-machine phone, dial (301)443-5158 and request item no. 910052. Supports grants to study the mental health problems and risks associated with rural life; ways that incidence and prevalence of mental disorders can be assessed and lowered; and ways that service delivery can be made more accessible and delivered more economically in rural areas by using telecommunications. For example, ORMH funds telepsychiarty research grants to stimulate research and demonstration projects in the use of telecommunications for delivery of mental health services in rural areas.
Contact: achecker@nih.gov or http://www.nimh.nih.gov/grants/index.htm

Experience with a Rural Telepsychiatry Clinic for Children and Adolescents.
by D.J. Ermer (1999). *Psychiatric Services, 50,* 260-261.

Access to child and adolescent psychiatric services in many rural areas is limited by lack of physicians and long travel times. A child and adolescent telepsychiatry clinic that is part of the University of Kansas Medical Center's telemedicine program addresses this problem by linking the medical center with a county mental health center in rural Pittsburg, Kansas. The clinic receives 10-18 visits a week and has been able to serve severely disturbed children and children in crisis. The quality of clinical interactions in the telepsychiatry clinic appears comparable to that in face-to-face meetings.

An Evaluation of an Australian Videoconferencing Project of Child and Adolescent Telepsychiatry.
by H. Gelber & M. Alexander (1999). *Journal of Telemedicine and Telecare, 5,* s21-s23.

A user satisfaction survey of videoconferencing services for child and adolescent mental health was carried out over a 2-year period in Victoria, Australia. The aim was to evaluate key utilization areas, effect on professional practice, and advantages and disadvantages of the video-conferencing service. Consultations were reported as the most frequent use of video-conferencing equipment (62%) followed by clinical use (59%), supervision (36%), teaching (19%) and administration (14%). Fifty-seven per cent of respondents reported that video-conferencing had affected professional practice. Advantages of the services included cost savings (52%) while disadvantages included technological problems (40%). The findings show the benefits of video-conferencing for improving the delivery of mental health care in rural Australia.

Integrating Telehealth and Media: Radio Psychology
by Marie-Helene Pelletier, MA

Various issues have emerged as a result of the increasingly combined use of the Internet and the media. This researcher for a radio and internet show about psychology examins how radio and the internet work in conjunction to educate the public about psychology in easily digested ways. It appears the activities may fit into the broader definition of innovative telehealth applications. One of these applications is creating interaction through the use of the Internet. Listeners e-mail the show's host, and also post messages on a public bulletin board system. In addition, the internet allows easy recruitment of experts for the show from all over the world. Last, because the show is broadcast on a website over streaming audio, it is accessible from virtually anywhere in the world.
http://www.telehealth.net/articles/integrating.html

Telehealth and the Evolving Health Care System: Strategic Opportunities for Professional Psychology
by D.W. Nickelson (1998). *Professional Psychology: Research and Practice, 29,* 527-535

Telehealth (previously telemedicine) -- the use of telecommunications to provide health information and care across distance -- has reemerged as a potentially effective way to provide general and specialty health care services and appears poised to enter mainstream health service delivery. Barriers to the appropriate development of telehealth must be examined and addressed. Professional psychology's ongoing integrated legislative, legal, marketplace, and consumer education strategies for dealing with recent broader market-driven changes in the health care system is seen as providing a solid framework for analyzing and ensuring that psychological practice is poised to manage the opportunities and challenges presented by this emerging field.

The Internet: Applications for Mental Health Clinicians in Clinical Settings, Training, and Research. *Psychiatric Services June 1996 Vol. 47 No. 6*

This column describes the Internet and its use, focusing on applications (or mental health professionals). Examples of resources on the Internet, such as drug information and requests for proposals, are presented. E-mail and publishing on the Internet, including on-line journals, are also discussed, and information about discussion groups is provided. Finally, hardware and software requirements are addressed.

BEST COPY AVAILABLE

Cybertherapy: Stress Management Online -- http://www.masteringstress.com

This online therapy program was developed by UCLA psychiatrist Dr. Roger Gould. It "emulates the methodology of a live therapist and helps individuals identify and sort out key issues." For one dollar a day, individuals who could not afford to see a traditional therapist, do not have the time, or are concerned about the stigma of seeing a therapist vent problems online and engage in therapeutic conversations with a program primarily geared toward stress management and recommended for people with less severe psychological problems.

Psychological applications on the Internet: A discipline on the threshold of a new millennium by A. Barak (1999). *Applied & Preventative Psychology, 8,* 231-245

Article critically reviews various psychological applications in use on the Internet, with special emphasis given to their promises and advantages as well as to their shortcomings and problems. Specifically, 10 types of psychological Internet applications are reviewed: information resources on psychological concepts and issues; self-help guides; psychological testing and assessment; help in deciding to undergo therapy; information about specific psychological services; single-session psychological advice through e-mail or e-bulletin boards; ongoing personal counseling and therapy through e-mail; real-time counseling through chat, web telephony, and video-conferencing; synchronous and asynchronous support groups, discussion groups, and group counseling; and psychological and social research. Following a discussion of ethical and related concerns, a call is voiced for intensive research and international brainstorming.

Services by Telephone, Teleconferencing, and Internet: A Statement by the Ethics Committee of the American Psychological Association

The American Psychological Association's Ethics Committee issued the following statement on November 5, 1997 based on its 1995 statement on the same topic.

The Ethics Committee can only address the relevance of and enforce the "Ethical Principles of Psychologists and Code of Conduct" and cannot say whether there may be other APA Guidelines that might provide guidance. The Ethics Code is not specific with regard to telephone therapy or teleconferencing or any electronically provided services as such and has no rules prohibiting such services. Complaints regarding such matters would be addressed on a case by case basis.

Delivery of services by such media as telephone, teleconferencing and internet is a rapidly evolving area. This will be the subject of APA task forces and will be considered in future revision of the Ethics Code. Until such time as a more definitive judgment is available, the Ethics Committee recommends that psychologists follow Standard 1.04c, Boundaries of Competence, which indicates that "In those emerging areas in which generally recognized standards for preparatory training do not yet exist, psychologists nevertheless take reasonable steps to ensure the competence of their work and to protect patients, clients, students, research participants, and others from harm." Other relevant standards include Assessment (Standards 2.01 -2.10), Therapy (4.01 - 4.09, especially 4.01 Structuring the Relationship and 4.02 Informed Consent to Therapy), and Confidentiality (5.01 - 5.11). Within the General Standards section, standards with particular relevance are 1.03, Professional and Scientific Relationship; 1.04 (a, b, and c), Boundaries of Competence; 1.06, Basis for Scientific and Professional Judgments; 1.07a, Describing the Nature and Results of Psychological Services; 1.14, Avoiding Harm; and 1.25, Fees and Financial Arrangements. Standards under Advertising, particularly 3.01 - 3.03 are also relevant.

Psychologists considering such services must review the characteristics of the services, the service delivery method, and the provisions for confidentiality. Psychologists must then consider the relevant ethical standards and other requirements, such as licensure board rules.

Additional Resources Related to Model Programs and Guides: Psychiatry / Psychology

Evaluation of a telepsychiatry pilot project

by Doze, S. Simpson, J., Hailey, D., & Jacobs, P. (1999). *Journal of Telemedicine and Telecare, 5,* 38-46.

An assessment of a telepsychiatry pilot projection in which a psychiatric hospital was linked with MH clinics in 5 general hospitals. Information was collected through questionnaires administered to patients, service providers and psychiatric consultants, and by interviews. The technology was considered easy to use by participating health-care professionals and patients, and the quality of the sound and picture was adequate. Survey data suggested acceptance and satisfaction on the part of patients, service providers and psychiatric consultants. An economic analysis indicated that at 396 consultations per year the service cost the same as providing a traveling psychiatrist (C$610 per consultation); with more consultations, telepsychiatry was cheaper. Information gathered during the evaluation suggested that the use of video-conferencing for psychiatric consultations was a viable option for an integrated, community based mental health service.

Patient satisfaction with telemedicine consultation in primary care: Comparison of ratings of medical and mental health applications

by Callahan, E., Hilty, D., & Nesbitt, T. (1998). *Telemedicine Journal 4,* 363-9.

Assesses the viability of telemedicine as a vehicle for offering mental health consultations to primary-care patients. Satisfaction ratings from 34 mental health encounters were compared with ratings from a convenience sample of 59 non-mental encounters on four aspects of satisfaction: self-reported ability to speak freely; probability of further use of telemedicine; perceived experience of telemedicine personnel; and relative preference for a telemedicine visit compared with a face-to-face visit. The study was conducted in the context of the Telemedicine Program at the University of California, Davis. No significant differences in satisfaction were found between mental health and non-mental health encounter groups for any of the four aspects of satisfaction. Concludes that: "Ratings from patients receiving mental health consultations using telemedicine yielded levels of satisfaction similar to those found in telemedicine consultations in non-mental health medical areas. The results support telemedicine as a means to extend mental health consultation to rural primary-care patients."

Arizona telepsychiatry project gains national attention, patient approval

Mental Health Weekly (Jan 19 1998), 8, 3:4.

Focuses on the telepsychiatry project of the Northern Arizona Regional Behavioral Health Authority. Main purpose of facilitating mental health care in the region; Role of simplifying case management and prior authorization; Citation as one of the nation's 10 best telemedicine efforts by the magazine "Telemedicine and Telehealth Networks."

Use of video-phones and low-cost standard telephone lines to provide a social presence in telepsychiatry

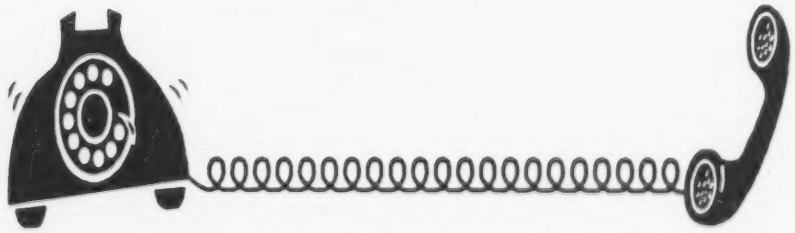
by Cukor, P., Baer, L., Willis, B., Leahy, L., O'Laughlen, J., Murphy, M., Withers, M., & Martin, E. (1998). *Telemedicine Journal, 4,* 313-21.

Research findings suggest that the value added by the video channel of currently available video conferencing technology is limited to the creation of a social presence of the other party. Almost all clinical information exchange takes place on the audio channel, while the interpersonal interactions (nods, blinks, facial expressions, and body language) which are so important in a face-to-face meeting, may not be adequately captured by the video. Several of case studies are presented which suggest that, consistent with the social presence role for video, low-cost videophones may be effectively substituted for expensive IDSN-based systems in many mental health applications.

BEST system is a medical miracle.
by D. Ashbrand (Sep 18 1995), *Infoworld : 68.*
Describes the Boston Emergency Services Team's (BEST) new database and network for providing emergency care for distressed individuals who may be suicidal, profoundly depressed, or disoriented. The client/server architecture boasts a strong scalability and smart messaging services to route information.

The tele-assessment of cognitive state: A review
by C. Ball & P. McLaren (1997). *Journal of Telemedicine and Telecare 3,* 126-31.
The telephone is used by all mental health professionals and many of their clients. Despite this, the telephone has been formally evaluated only occasionally. This paper reviews the literature on cognitive testing by telephone and video conferencing, and summarizes the different strategies employed to do this task. The authors' conclude that there remain weaknesses in the use of the telephone for cognitive testing but it could certainly be used more extensively in both clinical work and research, although the choice of test must be made with a clear view of what the assessment is designed to achieve and the limitations of the assessment instrument itself. Assessment by video conferencing remains at an early stage of development, with much work to be done before it can be routinely employed as a clinical tool.

Telepsychiatry in Appalachia
by M. Graham (Mar/Apr 1996) *American Behavioral Scientist 39,* 602-15.
Part of a special issue on community-oriented research. An investigation of the challenges and opportunities presented by telepsychiatry in a rural public mental health system is provided. An overview of telemedicine is presented in order to demonstrate the range of applications of this technology. A description of APPAL-LINK, the Southwestern Virginia Telepsychiatry Project, is provided, starting with its inception as a response to a critical shortage of psychiatric manpower in the public mental health system in Appalachia. In addition, the methods employed in this telepsychiatry project and a preliminary six-month evaluation of patient, provider, and community satisfaction are described. Finally, the obstacles to the broader implementation of telepsychiatry telemedicine projects in rural regions are considered.



Challenges and Strategies in Using Technology to Promote Education Reform

The vision for technology-supported reform-oriented classrooms is one in which student groups work on long-term, multidisciplinary projects involving challenging content that is interesting and important to them with the support of technology tools for collecting, analyzing, displaying, and communicating information. Making this vision a reality poses many challenges, including: Providing Adequate Technology Access; Equalizing Technology Access; Involving a Majority of Teachers; Providing Technical Support for Technology Use and Maintenance -- http://www.ed.gov/pubs/EdReformStudies/EdTech/approaches.html

Problem-Based Learning in Distance Education: A First Exploration in Continuing Medical Education

by C.E. Engel, E. Browne, P. Nyarango, S. Akor, A. Khwaja, A. A. Karim, & A. Towie (1992), *Medical Education, 26,* 389-401

The Wellcome Tropical Institute has assisted countries in the tropics to establish viable systems of continuing medical education, particularly for young doctors practicing in rural areas. In this context, the Institute has developed material for use in distance learning. The first attempt to apply the problem-based learning approach to written material for use by an individual learner in the absence of a tutor led to a trial in Ghana, Kenya and Pakistan to compare a conventionally designed module on the same topic for their respective acceptability, effectiveness and efficiency. The design, implementation and results of these three comparative trials are presented.

Excerpted From *Center for Children and Technology*
http://www2.edc.org/CCT/cctweb/public/include/pdf/11_1996.pdf

Distance Learning Evaluation: Final Report 1994-1995 New York City, New York

The New York City Public Schools implemented a distance learning program beginning in the fall of 1992. The project, called NYClassnet, was organized in an extensive collaboration between the high school division of the New York City Board of Education, the Borough of Manhattan Community College, the Lincoln Center Institute, and four public high schools in Manhattan and Brooklyn. The purpose was to create two way video/audio links among high schools, and with other educational institutions. Such joint classes were designed to expand the educational offerings available to students and their cultural horizons. The NYClassnet project explored some novel distance learning designs, linking high schools with a community college and with Lincoln Center. Each participating institution was linked by a NYNEX fiber optics cable. NYNEX provided the technological backbone, classroom technologies, and technical support for the project. Each participating school has one distance learning classroom, which connects them to a network providing two-way video and audio interaction with the other schools and the Lincoln Center Institute. During the study year thirteen NYClassnet classes were offered, 489 students enrolled, and 19 teachers participated. The Center for Children and Technology of the Education Development Center has conducted a research and evaluation study of NYClassnet. During the 1993-94 school year, we created and tested measurement instruments and collected background data about the project. Full data collection took place throughout the 1994-95 school year. Our findings from these data are summarized in this report. Detailed information about each of the instruments and measurement tools is available in the Appendix.

The highlights of the studies are sunmmarized on the following page.

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Distance Learning Evaluation: Final Report 1994-1995 NY, NY (cont.)

Highlights of the studies -- Excerpted From: *Center for Children and Technology*
http://www2.edc.org/CCT/cctweb/public/include/pdf/11_1996.pdf

1. Distance learning was seen as an important innovation by administrators, teachers and students alike. Its purpose was seen by administrators and teachers to be primarily meeting the diverse learning needs of students and to bring people together across distances, exposing students to other cultures. Many teachers saw emotional rewards for students whose feelings of being "special" and "worthy" were enhanced because they were given access to advanced equipment.

2. The distance learning project has been successful overall in relation to the central goals of administrators and teachers: a range of classes have been conducted, and new course content has been added. Basic logistics have been worked out, although chronic problems of scheduling across schools and planning remain a challenge.

3. Though there was improvement after the first year of implementation, the technology was perceived as a continuing problem by most teachers. Our classroom observational data provided objective support that technical problems occurred with some frequency in the observed classes.

4. The pedagogy in the distance learning classes was not notably different from that of traditional high school classes, though teachers frequently reported that more planning time was required for distance instruction.

5. Students' achievements in distance learning classes were not consistently or substantially better or worse when students' numerical grades in each distance learning class were compared with students' cumulative averages, or compared to a traditional comparison class. In some classes students did notably better, in some worse, and in some their performance was comparable to their average performance.

6. We were interested in how distance learning classes compare with traditional classes in terms of amount and type of interaction. Systematic observational analyses from four focal classes indicate that participation by both teachers and students (talking, lecturing, asking and answering questions) is very similar for distance learning and traditional classes, with the exception that there is a trend toward shorter turns for students in distance learning compared with non-distance learning classes.

7. We discovered that in distance learning classes, in-class interaction is only a part of the overall category of *relationship*, which is very important to both teachers and students. Expansion of the social world of students was a prominent goal for the project.

8. For the most part, administrators reported that teachers volunteer for distance learning classes, though the administrators admitted that they often had particular individuals in mind to teach certain courses, within the constraints of the course needs defined by the project.

9. Though many students reported that they were not fully aware that they had enrolled in an interactive, on-line class at first, they also reported that they quickly grew accustomed to the technology in the classroom and felt comfortable with it.

Over half of the students reported that they took distance learning in order to take a course that was not otherwise offered. Students commonly reported being pleased with personal benefits derived from participation in die distance learning classes, overcoming shyness, and meeting new students.

Research over the last decade suggests that 3 to 5 years is generally required for substantial technology-enhanced innovation. It is essential to continue to monitor and refine the implementation of this project as the technology, the education goals and social context change.

Accessing the Internet
Guidelines for Beginners and Mental Health Resources for Experts

This article in *Behavioral Healthcare Tomorrow* (Nov./Dec. 1994) provides a guide to accessing the internet. Part I provides an overview for beginners from two experts with the Boston Computer Society, the oldest and largest computer user organization in the world. Part II provides information to those with previous Internet experience who want to access specialized mental health information resources. It is written by an expert in this area who has served as a member of the Information System Committee of the American Psychiatric Association.

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Health Advocates' Guide to the Internet

A Publication from the National Health Law Program (September 1999)
Francis Cheng

An easy-to-read guide that provides an introduction to the Internet, gives detailed explanation of search engines and group e-mail lists, and directs the reader to a wealth of Internet resource for health advocates. The article gives an introduction on the Internet and on how to use it efficiently and successfully by giving tips for searching on the Internet. Along with Internet use, the article is also informative on e-mail, and how to make it easier to use e-mail. The article also features Internet resources for health advocates. The chapter loosely follows the framework of the NHeLP website (www.healthlaw.org). Resources for topic areas are discussed, and references to helpful websites are given. The lists are not comprehensive, but rather are meant to help a new advocate get started on the Internet.

- Chapter 1 Introduction to the Internet
- Chapter 2 Search Engines (Basic Search Concepts, Natural Language Searches, Using the Best Search Terms, Using the Right Search Tools)
- Chapter 3 E-mail and Mailing Lists (How to Recognize and E-mail Address, How to Get an E-mail Account, How to Get Your E-mail Messages, Mailing Lists)
- Chapter 4 Internet Resources for Health Advocates (Legal Research, Consumer Resources, Immigrant Health, Managed Care, Medicaid, Medicare, Public Accountability, Racial Cultural Issues, Reproductive Health, State and Regional Issues, HIV AID)

Information on Getting a copy of the Guide: Hard copies are available for $10 from the National Health Law Program, 2639 S. La Cienega Blvd., Los Angeles, CA 90034 Ph: 310-204-6010; FAX: 310-204-0891; e-mail: nhelp@healthlaw.org; Free online at http://www.healthlaw.org

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Software Applications for Behavioral Health: A Directory and Resource Guide
National Community Mental Health Council 1996

Directory provides community behavioral healthcare providers with basic information that will enable them to answer questions on what software is available, what it will do, and how to get more information. Lists the hardware and software features of vendors working directly with the behavioral healthcare market.

Contact: National Community Mental Healthcare Council, 12300 Twinbrook Parkway, Suite 320, Rockville, Maryland 20852 Phone: (301) 984-6200, Fax: (301) 881-7159

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VII. Agencies, Organizations, & Internet Sites

The following resources deal with technology as related to such topics as assessment, curriculum development, distance learning, enrichment, intervention planning, implementation, and evaluation,, information management, professional education, and quality assurance.

http://www.ed.gov/pubs/OR/consumerGuides/internet.html
U.S. Department of Education Consumer Guide: An Introduction to the Internet. This site answers questions such as: What is the internet? How do I explore the Internet? What Information is Available? It also offers links to government sites.

http://www.science.widener.edu/~withers/webeval.htm
Widener University/Wolfgram Memorial Library's Evaluating Web Resources
Contains evaluation checklists for web sites which focus on advocacy, business/marketing, news, information, and personal exposure. There are also links to examples for each of these categories and guiding questions on the quality of examples in each category. A lesson plan for teaching the content of this site is also included.
Contacts: Jan Alexander or Marsha Ann Tate, Wolfgram Memorial Library, Widener University, One University Place, Chester, PA 19013 Email: Janet.E.Alexander@widener.edu Marsha.A.Tate@widener.edu

http://www.victoriapoint.com/catalyst.htm
Catalyst offers information about computers in psychology. Their site has articles and resources on cyberpsychology, human-computer interaction, technology in education, online counseling, psychology software, and more. This web page serves as both a resource for new research and products and a forum for discussing the significance of computer technology in psychological science.

http://www.mcrel.org/
The Mid-Continent Regional Educational Laboratory (McREL) is a non-profit organization dedicated to improving the quality of education. Major research areas at McREL include standards, curriculum, and instruction, assessment and accountability, human development, learning and motivation, organizational and leadership development, mathematics and science, technology, diverse student population issues, and evaluation and policy studies. McREL has more than 30 years of experience providing technical assistance and consultation for school improvement.
Contact: Linda Brannan, 2550 South Parker Rd., Suite 500, Aurora, CO 80014
Ph: (303) 337-0990/ Fax: (303) 337-3005 Email: info@mcrel.org

http://www.fno.org (From *Now On-The Educational Technology Journal*)
This website, published by Jamie McKenzie is devoted to reviewing the current information on educational technology and helping to integrate technology in the classroom. There are free monthly newsletters, resource recommendations, and information regarding assessment, policy, and development.

http://rtec.org
The *Regional Technology in Education Consortia's* mission is to improve student achievement with technology. R*TEC was established to help states, local educational agencies, teachers, school library and media personnel, administrators, and other educational entities successfully integrate technologies into kindergarten through 12th grade classrooms, library media centers, and other educational settings, including adult literary centers.

http://www.ed.gov/NLE
The National Library of Education's Technology Resources Center offers an opportunity to explore what is available in technology, use state-of-the-art equipment, and look at programs. It has one of the largest collections of CD-ROM players and software in the area.
U.S. Department of Education, OERI, 555 New Jersey Avenue NW, Washington, DC 20208-5721 Phone: (202)219-1699/ Fax: (202) 219-1696

http://www.nap.edu/readingroom/books/techgap/welcom.html
Reinventing Schools: the Technology is Now! -- A report on how computers and other information technologies can be used for educational purposes in school classroom settings. The report focuses on the idea that schools have to be reinvented to take advantage of the technology students use daily and use this as educational resource.

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http://www.ed.gov/pubs/EdReformStudies/EdTech/

Technology and Education Reform -- A research project sponsored by the Office of Educational Research and Improvement U.S. Department of Education conducted by SRI International. This report of the research project looks at nine school sites where school staff were active participants in incorporating technology in ways that support education reform. It is a report of the experiences of the teachers and students at these schools.

http://ericae.net

ERIC Clearinghouse on Assessment and Evaluation -- A listing of assessment and evaluation material from the Educational Resources Information Center. Categories include: Assessment, Evaluation, Statistics, & Educational Research, information regarding the Educational Resources Information Center and key numbers to contact for further information. Contact: ERIC® Clearinghouse on Assessment and Evaluation, 1129 Shriver Laboratory, College of Library and Information Services, University of Maryland, College Park, College Park, MD 20742 Ph: (800) 464-3742, (800) Go 4 ERIC, (301) 405-7449; Email: feedback@ericae.net

http://ericir.syr.edu/ithome/index.html

The ERIC Clearinghouse on Information &Technology (ERIC IT) is one of 16 clearinghouses in the ERIC system. It specializes in library and information science and educational technology. ERIC IT acquires, selects, catalogs, indexes, and abstracts documents and journal articles in these subject areas for input into the ERICdatabase.

Contact: Michael B. Eisenbers, Director, Eric Plotnick, Assi 4-194 Center for Science &Technology, Syracuse University, Syracuse, NY 13244 Ph: (315) 443-3640/ Fax:(315) 443-5448 Email: Eric@ericir.syr.edu

http://www.lab.brown.edu/public/ocsc/collaboration.guide/

"Electronic Collaboration: A Practical Guide for Educators" -- This guide features an 11-step process for making online collaborative projects successful. It also offers explanations of various kinds of online collaborations--discussion groups, data collection & organization, document sharing, synchronous communication, and online workshops and courses.

http://www.ed.gov/free/

Federal Resources for Educational Excellence (FREE) -- More than 30 Federal agencies formed a working group to make hundreds of federally supported education resources available at this website. This site has resources for students, parents, and teachers, and ranges from on-line libraries to curriculum materials to Internet classes to downloadable software and more. Those who visit the site can search the site by subject, read comments and suggestions made by others who have visited, add comments of their own, or make requests for material they might not have found.

http://www.alleydog.com

AlleyDog.com is a WWW company started by Doug Kaufman to help students in their psychology classes. The site is completely free to students and has lots of resources, including interactive quizzes that provide immediate feedback, an online glossary of terms written in "regular" English, class notes, areas to send in psychology-related questions, and more. There are also bulletin boards, a chat room, and contests that are all psychology related.

Contact: Doug Kaufman, President, Email: doug@alleydog.com

http://milton.mse.jhu.edu:8001/research/education/net.html

Evaluating Information Found on the Internet -- A web site developed by Elizabeth Kirk, the library instruction coordinator for the library at The John Hopkins University. This site features an essay which suggests five evaluation criteria: authorship, publishing body, point of view, referral to other sources, accuracy, and verifiability. The author analyzes how to apply each of these criterion to web sites. Useful for teachers, less so for students.

Contact: Elizabeth E. Kirk, Electronic and Distance Education Librarian, Milton S. Eisenhower Library, 3400 N. Charles Street, Baltimore MD 21218-2683 Ph:(410)516-8279; Fax:(410)516-8599; Email: ekirk@jhu.edu

http://thorplus.lib.purdue.edu/library_info/instruction/gs175/3gs175/evaluation.html

Purdue University's Evaluating World Wide Web Information -- Provides a simple checklist for determining web site quality. Some visuals help explain the lists criteria. Useful for teachers and high school (and above) students.

http://refserver.lib.vt.edu/libinst/critTHINK.HTM
Bibliography on Evaluating Internet Resources -- Nicole Auer, library instruction coordinator at Virginia Polytechnic Institute and State University, assembled this site. This periodically updated list provides citations to online and print sources on evaluating internet resources.

http://www.dssc.org/frc/textonly/newslett/summer96/ncite.htm
National Center to Improve the Tools of Educators (NCITE) -- The central mission of the National Center to Improve the Tools of Educators (NCITE) is to work closely with those who develop and publish curriculum materials and to examine how best to "design" the next generation of learning tools-textbooks, computer programs, multi-media presentations that will best serve all students in a new era of increasing diversity in our nation's classrooms. NCITE will work with developers to help shape the educational marketplace of tomorrow.
College of Education, University of Oregon, 805 Lincoln, Eugene, OR 97401
Email: douglas_carnine@ccmail.uoregon.edu

http://www.mchb.hrsa.gov/
The National Center for Policy Coordination in Maternal and Child Health supports the coordinated development and implementation of maternal and child health policy at the local, state, and federal levels through the development of institutional collaborations, the design and coordination of health care systems models, and the application of information technology.
John Reiss, Director, 5700 SW 34th St., Gainesville, FL 32610 Ph: (904) 392-5904/ Fax: (904)392-8822

http://www.edc.org/fsc/ncip/
The National Center to Improve Practice (NCIP) promotes the effective use of technology to enhance educational outcomes for students with sensory, cognitive, physical and social-emotional disabilities.
Education Development Center, Inc., 55 Chapel Street, Newton, MA 02158-1060
Ph: (617) 969-7100/ Fax: (617) 969-3440 Email: ncip@edc.org

http://www.ed.gov/pubs/EdReformStudies/EdTech/
Technology and Education Reform -- A research project sponsored by the Office of Educational Research and Improvement U.S. Dept. of Education conducted by SRI International. This is a report of the research project looking at nine school sites where school staff were active participants in incorporating technology in ways that support education reform. It is a report of the experiences of the teachers and students at these schools.

http://www.lab.brown.edu/public/ocsc/collaboration.guide/
"Electronic Collaboration: A Practical Guide for Educators" -- This guide features an 11-step process for making online collaborative projects successful. It also offers explanations of various kinds of online collaborations--discussion groups, data collection & organization, document sharing, synchronous communication, and online workshops and courses. Email: kirk_winters@ed.gov

http://www.onlineclinics.com
This website provides therapists access to online offices from which to provide services to individuals in need.

http://www.shrinksonline.com
A website that provides a virtual meeting place for behavioral healthcare professionals to exchange ideas and interact with colleagues in an informal environment. To become a member of ShrinksOnline, you must have a postgraduate degree in education, medicine or a behavioral science. Students must currently be enrolled full time in a postgraduate program.

http://www.ismho.org/
The *International Society for Mental Health Online (ISMHO)* was formed to promote the understanding, use and development of online communication, information and technology for the international mental health community. ISMHO's goals include: to aid and stimulate mental health professionals and clients in the development of new online technology and applications; educate mental health professionals and clients about existing online information and communication technologies and applications; explore and develop the use of computer assisted communication in the work of mental health; develop standards for online interactions between mental health professionals and consumers.

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http://www.hec.ohio-state.edu/famlife/bulletin/bullmain.htm
The Human Development & Family Life Bulletin is a professional medium for the exchange of information regarding family life education. The Bulletin is for professionals interested in improving the lives of children and families.
Contact: Robert Hughes, Jr. Ph.D., Ph: (614) 292-4753 Email: hughes.239@osu.edu

http://lib.nmsu.edu/staff/susabeck/eval.html The Good, the Bad & the Ugly (or, Why It's a Good Idea to Evaluate Web Sources)
Allows you to ask yourself evaluative questions as you look at web sites which illustrate various pitfalls in web site research. Four sets of web site examples are shown for comparison on AIDS, immigration, smoking, and the effects of drugs. Useful for upper grade students.
Contact: Susan E. Beck Email: susabeck@lib.nmsu.edu

http://refserver.lib.vt.edu/libinst/critTHINK.HTM
Bibliography on Evaluating Internet Resources -- Nicole Auer, library instruction coordinator at Virginia Polytechnic Institute and State University, assembled this site. This periodically updated list provides citations to online and print sources on evaluating internet resources.

http://www.usu.edu/~mprrc/
The Mountain Plains Regional Resource Center (MPRRC) assists states and local education agencies to develop quality programs and services for children with disabilities and their families by keeping abreast of the most recent developments in special education research and practice, assisting in the adoption of new technologies and practices, identifying and analyzing persistent problems, linking those with similar needs or problems and assisting in the development of solutions, gathering and disseminating information as well as coordinating activities with other related centers or projects, assisting in training activities, and providing assistance with applications for grants, contracts, and cooperative agreements.
Contact: John Copehaver, Director, Utah State University, 1780 North Research Parkway,Ste.112
Logan, UT 84341 Ph: (801) 752-0238/ Fax: (801) 753-9750 Email: latham@cc.usu.edu

http://www.air-dc.org
The mission of the Technology, Educational, Media, and Materials Program at the Chesapeake Institute is to support projects and centers for advancing the availability, quality, use, and effectiveness of technology, educational media, and materials in the education of children and youth with disabilities and the provision of early intervention services to infants and toddlers with disabilities.
Address: 100 Thomas Jefferson Street NW, Ste 400, Washington, DC 20007
Phone: (202) 342-5600/ Fax: (202) 944-5454 Email: dosher@air-dc.org

http://www.LDonline.org
The LDonLine Report offers news about learning disabilities and about the latest events on the web site--LD OnLine. Email: Ldonline@weta.com

http://www.21ct.org
21st Century Teachers Network (21CT) is a nation-wide, non-profit initiative of the McGuffey Project, dedicated to assisting K-12 teachers learn, use, and effectively integrate technology in the curriculum.

http://www.ed.gov/Technology/intsaf.html
This webpage of the Department of Education provides informative links regarding internet safety for parents. However, it can also be useful to teachers or other individuals who work with children.

http://www.edc.org/CCT
Website for the Center for Children and Technology of the Education Development Center (EDC). The center conducts basic, applied, and formative research as well as technology design and development projects. The site includes information regarding projects and publications.

http://www.ed.gov/offices/OVAE/CTC http://www.ed.gov/GrantApps/#84.341
Community Technology Centers Application & Website
The Department invites applications for the Community Technology Centers Program (CTC) & requests experts to serve as field readers for the program. Local education agencies, institutions of higher education & community-based organizations are eligible. CTC launched a website that offers an overview, answers to frequently asked questions, information on how to apply, workshops for potential applicants, & more.

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http://www.ccmc.org/main.htm

Communications Consortium Media Center -- a public interest media center dedicated to helping non-profit organizations use media and new telecommunications technologies as tools for public education and policy change.

1200 New York Ave. NW suite 300, Washington, DC 20005 Ph: (202)362-8700
fax: (202)682-2154 email: Kmonihan@ccmc.org

Evaluating the World Wide Web

Excerpt from: Jeffrey P. Bakken & Gregory F. Aloia. In *Teaching Exceptional Children*, May/June 1998

The "Information Superhighway" is the Internet. It is the starting point and the link to all aspects of the technological revolution...educators should take and [provide] specific suggestions for using, applying, and evaluation the Internet in ways that will enable us to achieve our goal of educating all students.

Precautions

- *Don't give out personal information.* Personal information includes first and last name, address, home phone numbers, Social Security number, gender, where you go to school, or a picture of yourself.
- *Tell a teacher or parent about new friends.* Meeting new people can be very fun, but new friends should not discourage a child to tell anyone about them.
- *Don't arrange face-to-face meetings alone.* A responsible adult should accompany the child to the meeting. When in doubt, do not go.
- *Don't believe everything you read online.* There is no guarantee that what you read or what someone tells you is accurate and true.
- *Don't give out your password.* Under no circumstances should you give your password to someone on the Internet.
- *If someone makes you feel bad, tell someone about it.* If a child experiences any form of communication from the Internet that is intimidating, harassing, offensive, or threatening, he or she should document it and report it to someone in authority immediately.

Framing

All information -- valid and fictitious -- has essentially the same status on the computer screen.

One of our goals is to develop in our students the ability to analyze information and make decisions based on fact, truth, and reality. Students may not have the cognitive means to filter, qualify, or challenge what he or she reads.

Monitoring

Information on the Internet is unlimited and uncensored. However, there are ways to effectively deal with problems or unwanted or offensive material.

- Parents can teach safe behavior on the Internet.
- Schools should develop policies that establish guidelines for acceptable and unacceptable behavior.
- Concerned parents and teachers should purchase and use filtering blocking software to control sites and material they do not want their children to access.
- For a complete listing of Internet filtering programs visit the Web site: http://coe.ilstud.edu/gfaloia/ABC-R%20Scale/tecarticlehomepage.htm

VIII. Glossary:

Address, E-mail
A combination of an individual username and domain name necessary for electronic messages to be routed to the proper computer system and placed in the proper e-mail box. The two names are separated by an '@'.

Address, Internet
Four numbers separated by dots ('dotted quad') which uniquely identifies a computer system connected to the Internet. For each address there is a domain name. Either the address or the domain name can be used to access an Internet host for remote login (telnet) or file transfer (ftp).

ASCII (American Standard Code for Information Interchange)
In word processing, it is used to refer to the Text Only life format, and is the most universal method for importing and exporting text between software programs.

BBS (electronic Bulletin Board System)
An announcement and conferencing facility implemented in hundreds of software packages and run on thousands of computers both individual and networked.

Browsability
Ability to move easily throughout a web site. As the information on the site grows so should the organization and classification of the items in the collection. (i.e., table of contents)

CGI (Common Gateway Interface)
CGI scripting has been around for a long time in Internet terms. When a Web user's computer (the client) contacts a server by typing in a URL, the server must respond in a standard way. This means that all servers must share a common language. CGI enables you to run programs, or offer access to images or information that are not part of its own programming.

Conferencing, Electronic
Any means of discussion among two or more people undertaken via computer and communication media. This includes video conferencing

Cyberspace
Used by networkers to refer to the vast, worldwide reservoir of information being transmitted or stored by internetworked computers.

Database, network
Any electronically stored and network-accessible collection of information. Network databases include collections of full-text documents, tables, lists, graphics, programs, etc.

Distance Learning
In its broader context, distance learning is a term used to describe instruction where teachers are physically or geographically separated from their students. Cable companies, instructional television stations and electronic transmissions via phone lines are all systems that currently deliver distance learning opportunities into the nation's classrooms. More commonly, satellite technology is used to deliver accredited courses where participants watch and interact with the programs via a television set in their school, classroom or home.

E-mail (Electronic mail)
Written messages transmitted across networks (or within the same computer) and usually accessible only by the addressee either by using an online mail user agent (mail reader) or by downloading for reading and other processing offline. Each message contains a header with routing, date and subject information and a body containing the message. Mail is sent from computer to computer via telecommunications media. E-mail packages available on the University systems include WebMail (for students), GroupWise (for departments with a Novell local area network), and Pine (mallard IT Sun server). Employees are encouraged to check with their Administrative Computing Coordinator or departmental Network Administrator for advice on choosing a mail package. WebMail on the IT Sun (Mallard) is generally recommended for students.

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ERIC (Educational Resources Information Center)
A federally-funded national information system that provides access to an extensive body of education-related literature and bibliography. ERIC provides access via e-mail query, gopher server, telnet sites, and anonymous ftp sites.

FAQ (Frequently Asked Questions)
A compilation of the most often asked questions and answers on the topic covered by the newsgroup which maintains and updates the FAQ.

Font
Another name for a single typeface style. Several fonts can be part of a typeface family.

FTP (File Transfer Protocol)
The command (and process) for moving files or programs across the Internet from a remote server to your own host.

Freeware
Software you can download from the Web or FTP (File Transfer Protocol) site that doesn't require registration.

GIF (Graphics Interface Format)
A picture file compressed for fast downloading and uploading on the Internet.

Gopher
A text-only online information retrieval system on the Internet that has been widely replaced by the World-Wide Web. Software which permits searching files on remote hosts using layered menus. Text from these files can be read online or the files can be transferred to your computer.

HTML (HyperText Markup Language)
A text coding language for tagging text and graphics on a Web page. It identifies what's on a web page and how it will be rendered.

Information System
Any collection of organized value added data (i.e., books, billboards, libraries, world wide web server, etc.)

Inline plug-in
Software that adds something functional to another program, but can't stand alone as an application. It is external to your browser's own code, and is written by the companies that want their software readable on many platforms. A plug-in displays the work inside the browser, rather than in a separate viewer window.

Internet Service Provider
Also known as ISP, this can be any business or enterprise that acts as a middleman between the Internet and the connecting individual or agency. ISPs are usually geographically close to the connecting site and could vary from a commercial organization to a university. The ISP will assign the user an Internet "address" attaching their own domain name to the end of the code. It is this address which enables a user to receive mail.

ISP (Internet Service Provider)
Offer connections and services to the Internet and the World Wide Web. many providers offer free disk space on their servers, and you can use this storage option to upload your own Web site to the Internet.

Interactive Assistance
Customized help for particular users in particular situations beyond on-line help and how to's.

Interactive Technology
Refers to computer-based media that enable users to access information and services of interest, control how the information is presented, and respond to information and messages in the mediated environment (e.g., answer questions, send a message, take action in a game, receive feedback or a response to previous actions.)

Internet
A collection of networks and gateways around the world communicating via TCP/IP. Auburn University is connected to the Internet via the Alabama Research and Education Network.

Internet-ready
Refers to a computer which is not just capable of but actually connected to the Internet via a World-Wide Web browser.

Intranet
Set up by companies or organizations for their own internal use, and aren't open to the public. Intranets operate like the Internet and World Wide Web, but the content is specific to, and controlled by, the company that runs it.

IP address (Internet Protocol address)
The location of a particular connection to the Internet, expressed as four series of digits separated by dots. A computer connection registered with the DNS has a domain name associated with its IP address.

ISP(Internet Service Provider)
A company which offers dialup communication, including software for such services as e-mail, ftp, telnet, news, and Web browsing and publishing.

Java
Java, unlike JavaScript, is a complex, platform-independent programming language with built-in security and network communications capabilities which requires fairly extensive programming expertise to master. Java programs, or applets, can be launched from a Web browser, or run on a Web server, or may operate independently from the Web. Java is also increasingly being used for application programs, such as word processors, spreadsheets, and database front-ends and "push" media. See Miva.

JavaScript
JavaScript, unlike Java, is a simple scripting language for Netscape Navigator that allows Webspinners to easily add such interactive features as input checking, personalization, current date and time, and other special effects to their Web pages. JavaScript requires no development tools, can be combined with HTML and is interpreted directly by the browser without burdening the resources of the server. Both Java and JavaScript are object-oriented languages.

List server
An electronic mailing list. Everyone on the list receives every message that is sent by any of the subscribers. Instructors often use list servers to facilitate communication among participants in a class.

Mailists
A conference/discussion group in which all messages are sent to one e-mail address from which they are redistributed to the e-mail boxes of everyone who has subscribed. All messages are expected to pertain to a specific topic. If moderated, messages will be reviewed before distribution.

Meta-search engines
Internet applications that allow you to input queries into a field, select various databases, and submit your query.

Modem
A device which connects between a computer and a phone line to translate between the digital signal of the computer and the analog signal required for telephone transmission.

Multimedia
The use of computers to present text, graphics, video, animation, and sound in an integrated way. Long touted as the future revolution in computing, multimedia applications were, until the mid-90s, uncommon due to the expensive hardware required. With increases in performance and decreases in price, however, multimedia is now commonplace. Nearly all PCS are capable of displaying video, though the resolution available depends on the power of the computer's video adapter and CPU. Because of the storage demands of multimedia applications, the most effective media are CD-ROMs.

Netscape
A World Wide Web browser

Newsgroup
An online forum for discussion of related topics, accessible by a newsreader. Some newsgroups allow postings or messages from anyone, while others are moderated (postings are screened).

Password
A code known only to the user ID owner which verifies his or her identity to a computing resource system. This code is usually 6-8 characters in length and should be a mix of numbers and letters (lower and upper case). The purpose of a password is to authenticate the user before gaining system access.

PDF
Portable Document Format. The file format of documents viewed and created by Adobe Acrobat software, developed as a standard format for Internet documents. Advantages of PDF are that it is totally "cross-platform" (viewable by computers on all operating systems) and that all graphics, formatting and page layout are faithfully preserved.

Readability
connotes well-implemented graphic design and visual appeal or practicality.

Searchability
the function of a search is similar to the index of a book. The downside is that search engines require the users to articulate their information need in the terms of the system's query language.

Shareware
Low-cost software applications that you can download from the Web and FTP sites. These time limited demos require registration and payment of fees for long-term use.

SMTP (Simple Mail Transfer Protocol)
The Internet standard protocol for transferring electronic mail messages from one computer to another. SMTP specifies how two mail systems will interact and the format of control messages they exchange when transferring mail. It defines the details needed for e-mail servers around the world to communicate with each other.

Telecommunications
Long distance communications using electromagnetic systems - including wire (e.g. telephone or telegraph) and broadcast transmission (e.g. radio, television, or satellite).

URL (Uniform Resource Locator)
The electronic address for an information source on the Internet, such as an ftp site, gopher server, or Web page The format for specifying the address of an Internet document. The URL is made up of three parts: the Protocol *http*, the server name *www.company.com*, and the path of the document */ example/doc.html*

World-Wide Web (WWW or W3)
Avast collection of interconnected files and programs spanning the globe and retrievable via a client-server system utilizing hypertext. The Web is accessed by programs called browsers (e.g., Netscape or Internet Explorer). Users navigate the Internet by following links from document to document on computers located anywhere in the world. Web files are represented as hypertext (in HTML format) and linked to other documents by their URLs. The Web encompasses not only its native http protocol, but also ftp, nntp (news), gopher, and telnet. Newer browsers can deliver not only text and pictures, but sound, animation, and multimedia applications.

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Auburn University, Technology Information Help Desk
http://www.auburn.edu/hotline/glossary.html

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We hope you found this to be a useful resource.
There's more where this came from!

This packet has been specially prepared by our Clearinhouse. Other Introductory Packets and materials are available. Resources in the Clearinghouse are organized around the following categories:

Systemic Concerns

- Policy issues related to mental health in schools
- Mechanisms and procedures for program/service coordination
  - Collaborative Teams
  - School-community service linkages
  - Cross disciplinary training and interprofessional education
- Comprehensive, integrated programmatic approaches (as contrasted with fragmented, categorical, specialist oriented services)
- Issues related to working in rural, urban, and suburban areas
- Restructuring school support service
  - Systemic change strategies
  - Involving stakeholders in decisions
  - Staffing patterns
  - Financing
  - Evaluation, Quality Assurance
  - Legal Issues
- Professional standards

Programs and Process Concerns

- Clustering activities into a cohesive, programmatic approach
  - Support for transitions
  - Mental health education to enhance healthy development & prevent problems
  - Parent/home involvement
  - Enhancing classrooms to reduce referrals (including prereferral interventions)
  - Use of volunteers/trainees
  - Outreach to community
  - Crisis response
  - Crisis and violence prevention (including safe schools)
- Staff capacity building & support
  - Cultural competence
  - Minimizing burnout
- Interventions for student and family assistance
  - Screening/Assessment
  - Enhancing triage & ref. processes
  - Least Intervention Needed
  - Short-term student counseling
  - Family counseling and support
  - Case monitoring/management
  - Confidentiality
  - Record keeping and reporting
  - School-based Clinics

Psychosocial Problems

- Drug/alcohol abuse
- Depression/suicide
- Grief
- Dropout prevention
- Gangs
- School adjustment (including newcomer acculturation)
- Pregnancy prevention/support
- Eating problems (anorexia, bulimia)
- Physical/Sexual Abuse
- Neglect
- Gender and sexuality
- Self-esteem
- Relationship problems
- Anxiety
- Disabilities
- Reactions to chronic illness
- Learning, attention & behavior problems